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SCRIPTURE NATURAL HISTORY;

BEING AN ACCOUNT OF

Animals, Trees, Plants, and Precious Stones

MENTIONED IN

HOLY SCRIPTURE,

GIVEN PRINCIPALLY IN

EXTRACTS FROM THE WORKS OF TRAVELLERS:

TOGETHER WITH SOME

REMARKS ON AGRICULTURE, CLIMATE, &c.

With an Appendix.

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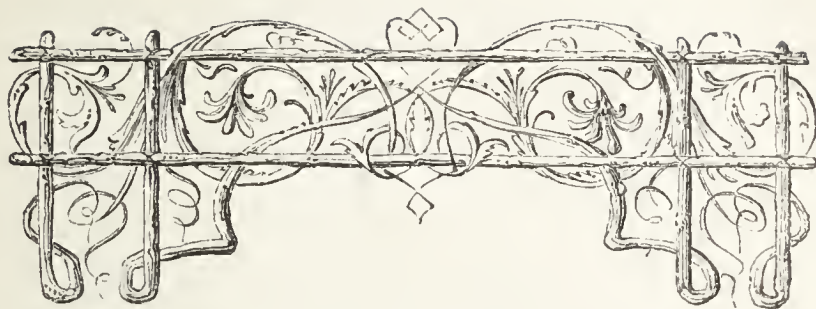
IN the Preface to the Second Edition of the “Manners and Customs in the East,” it was mentioned that the chapters on Natural History and Agriculture were therein omitted, and that it was intended they should form part of a separate volume. They are reprinted in the present work, with many additions gathered from various sources. A Scripture Herbal, and a brief account of Precious Stones, is also contained in this little Book. On these two subjects, the Compiler would observe, that the information respecting them has been put in the simplest form; so as, it is hoped, to prove intelligible and instructive to those who have hitherto had little or no knowledge on these points. Nice

Botanical and Mineralogical distinctions have therefore been carefully avoided; at the same time the Compiler trusts that the information given will be found so *generally* correct, as not to incur the censure of those whose time and talents have been long devoted to the study of these subjects.

M. F. M.

NEWPORT, I. W.

January 10th, 1848.



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SCRIPTURE NATURAL HISTORY.

CHAPTER I.

ANIMALS MENTIONED IN SCRIPTURE.

ADDER, *see* SERPENT.
ALLIGATOR, *see* CROCODILE.
ANT.
ASS, WILD—WHITE.
BEAR.
BEHEMOTH.
BITTERN, *see* KANGFUD.
BOAR (WILD).
BUFFALO, *see* UNICORN.
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CHAMELEON.
CHAMOIS.
COCK-CROWING.
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DOG.
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FLY.
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GIRAFFE, *see* CHAMOIS.
GOAT.
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HORSE.

HYÆNA.
IBEX, *see* GOAT.
JACKAL, *see* FOX.
KANGFUD.
LEOPARD.
LION.
LOCUST.
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PARTRIDGE.
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QUAIL.
RHINOCEROS, *see* UNICORN.
RIVER HORSE, *see* BEHEMOTH.
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SCORPION.
SERPENT.
SNAKE, *see* SERPENT.
STORK.
WOLF.
WILD BEASTS.
UNICORN.
FONDNESS OF ANIMALS IN
EGYPT FOR WATER.

ANT.

PROVERBS vi. 6—8.

“Go to the ant, thou sluggard, consider her ways, and be wise : which having no guide, overseer, or ruler, provideth her meat in the summer, and gathereth her food in the harvest.”—xxx. 25.

“We came upon an immense colony of ants, all busily employed. They had made a highway from their dwelling of about forty yards in length, and this was literally covered with a black dotted line of these moving insects. Those going out carried nothing, but hurried along with great speed. Those returning carried a seed, or piece of straw. Another band were employed in carrying out a grain of the soil from the camp, making room for the new supply.”—*Narrative of a Mission to the Jews*, p. 95.

ASS.

GENESIS xxii. 3.

“Abraham rose up early in the morning, and saddled his ass.”

JUDGES v. 10.

“Speak, ye that ride on white asses, ye that sit in judgment.”

JOB xxxix. 5.

“Who hath sent out the wild ass free? or who hath loosed the bands of the wild ass?”

PSALM civ. 10, 11.

“He sendeth the springs into the valleys, which run among the hills. They give drink to every beast of the field; the wild asses quench their thirst.”

JER. ii. 24.

“A wild ass used to the wilderness, that snuffeth up the wind at her pleasure; in her occasion who can turn her away?”

xiv. 6.

“The wild asses did stand in the high places, they snuffed up the wind like dragons; their eyes did fail, because there was no grass.”

[DEUT. xxii. 10; JOSH. xv. 18; ISAIAH xxxii. 14.]



THE WILD ASS.

When travelling in Persia, Mr. Morier writes :—“On the desert.....in the grey of the morning, we gave chase to two wild asses, which had so much the speed of our horses, that when they had got at some distance, they stood still and looked behind at us, snorting with their

noses in the air, as if in contempt of our endeavours to catch them. The Persians sometimes succeed in killing them, but not without great dexterity and knowledge of their haunts. To effect this, they place relays of horsemen and dogs upon the track which they are known to pursue, and then hunt them toward the relays, when the fresh dogs and horses are started upon the half-exhausted animal. This animal is common to the whole of Persia, although its proper soil is Arabia. It is of a light mouse-colour, with a dark streak over its shoulders and down its back. The head is large, but it is much more light and lively than the common ass in its gait. It is of a most obstinate nature, and seems to be extremely refractory under any restraint. The wildness and love of liberty which characterize this animal are beautifully described by the prophet Jeremiah :— ‘ A wild ass used to the wilderness, that snuffeth up the wind at her pleasure ’ (ch. ii. 24), and again in ch. xiv. 6, when their image is allied to all the horrors of a parched desert.”—MORIER’S *Second Journey through Persia, &c.*, pp. 200–202.

“ The skins and hoofs of the wild ass are sold by the Arabs to the pedlars of Damascus, and to the people of Hauran. The hoofs furnish materials for rings, which are worn by the peasants on their thumbs, or fastened under the arm-pits, as charms against rheumatism.”—BURCKHARDT’S *Notes on the Bedouins, &c.*, vol. i. p. 221.

“ The best asses are those of Arabian blood. Their coat is smooth and clean ; they carry the head elevated, and have fine and well-formed legs, which they throw out gracefully. They are used only for the saddle, and are imported in vast numbers into Persia, where they fetch a high price, are richly caparisoned, taught an easy ambling pace, and used only by the nobles.”—CHARDIN.

WHITE ASS.

White asses come from Arabia; their scarcity makes them valuable, and gives them consequence. Mr. Morier says, that in Ispahan in Persia, "The Mollahs, or men of the law, are generally to be seen riding about on mules; and they also account it a dignity, and suited to their character, to ride on white asses, which is a striking illustration of what we read in Judges v. 10." —MORIER'S *Second Journey through Persia*, p. 136.





SYRIAN BEAR.

BEAR.

1 SAM. xvii. 34.

“Thy servant kept his father’s sheep, and there came a lion and a bear, and took a lamb out of the flock.”

2 KINGS ii. 23, 24.

“And (Elisha) went up...unto Bethel; and as he was going up by the way, there came forth little children out of the city and mocked him...and he turned back, and looked on them, and cursed them in the name of the Lord. And there came forth two she bears out of the wood, and tare forty and two children of them.”

ISAIAH xi. 7.

“And the cow and the bear shall feed; their young ones shall lie down together.”

HOSEA xiii. 8.

"I will meet them as a bear that is bereaved of her whelps."

[2 SAM. xvii. 8. PROV. xvii. 12.]

The bear mentioned in Scripture is the *brown* bear, so called to distinguish it from the white Polar bear, which is a far more savage animal. The brown bear lives upon berries, young birds, and eggs; seldom attacking animals unless forced to do so by hunger. It spends most of its time in its hole in the earth, or in the hollow of old trees, and throughout the winter remains quite torpid, living upon its own fat by absorption. The bear is a most useful animal. Of its skin the people of Kamtschatka make caps, gloves, dog-collars, and night-coverings, and shoe-soles which prevent their slipping when on the ice. Of its intestines, well scraped and cleaned, window panes are constructed as clear as Muscovy glass, and also masks for the women, which protect their faces from the beams of the sun, which in those countries often blacken the skin, from being reflected from the snow. Sickles are formed from the shoulder-blades, warm dresses from the *black* bear-skins; the fat of the animal melts into excellent oil, and the flesh is reckoned a feast. The exceeding love of the mother for her young ones is well known, and the most affecting stories are related of her sorrow and mournful cries when any evil befalls them. This maternal tenderness in the bear is often alluded to in the Bible.

Bears are so fond of honey that they will climb trees in search of bees' nests. They are often caught in Russia by a heavy block of wood, being suspended by a rope before the bees' nest, so that the bear must remove the obstacle before he can reach the longed-for honey. He tries to push it away, but it returns and strikes him; the next push, accompanied by a heavy growl, is

more violent, and consequently he receives a harder blow ; and at length is either killed or knocked down, and dispatched by his pursuers.



BEHEMOTH.

THE HIPPOPOTAMUS, SEA COW, OR RIVER HORSE.

JOB xl. 15—end.

“Behold now Behemoth, which I made with thee ; he eateth grass as an ox. Lo now, his strength is in his loins, and his force is in the navel of his belly. He moveth his tail like a cedar : the sinews of his stones are wrapped together. His bones are as strong pieces of brass ; his bones are like bars of iron. He is the chief

of the ways of God : he that made him can make his sword to approach unto him. Surely the mountains bring him forth food, where all the beasts of the field play. He lieth under the shady trees, in the covert of the reed, and fens. The shady trees cover him with their shadow, the willows of the brook compass him about. Behold he drinketh up a river, and hasteth not : he trusteth that he can draw up Jordan into his mouth. He taketh it with his eyes ; his nose pierceth through snares."

ISAI. xxiv. 17, 18.

"Fear, and the pit, and the snare, are upon thee, O inhabitant of the earth. And it shall come to pass, that he who fleeth from the noise of the fear shall fall into the pit."—JER. xlviii. 43, 44.

The hippopotamus is nearly as large as the elephant. Its head is enormous—its jaws extend upwards of two feet, armed with four cutting teeth, each twelve inches long ; its hide is so tough that it has resisted the strokes of a sabre, and it is thinly covered with light-coloured hair ; its legs are three feet long ; it moves slowly and heavily ; swims well ; has a tremendous voice, between the lowing of the ox, and the roar of the elephant ; when angry he will furiously attack men and boats ; his tail is extremely thick and strong, without hair ; he feeds on grass and vegetables, sleeping among the reeds.

This huge animal is very common in the rivers of Africa. The lake Muggaby "is nearly three miles long, and full half a mile broad ; its banks are beautifully green, and its depth is very great ; it contains hippopotami in great numbers, and every now and then their black heads appeared above the surface of the water."...

When at the Great Fish River, in South Africa, Mr. Barrow writes, "Towards the evening a vast number of hippopotami, or sea-cows, as they are called by the Dutch, were seen with their heads above the surface ;

but, keeping close to the opposite shore, they were too far to be easily hit with a musket-ball. Several of the paths of these animals led from various parts of the river to a spring of fresh water about a mile distant. To this spring they go in the night-time to drink, the water of the river for a considerable distance from the mouth being salt. They also graze during the night, and browse among the shrubbery."

The elephant and buffalo are frequently caught by "deep pits made in the ground across the paths that lead to their usual haunts. In this manner they sometimes took the hippopotamus; but the usual gait of this animal, when not disturbed, is so cautious and slow that he generally smelt the snare that was laid for him, and avoided it. The more certain method of destroying him was to watch at night behind a bush close to his path, and as he passed to wound him in the tendons of the knee-joint, by which he was immediately rendered lame and unable to escape. Numbers of this huge animal still remain in all their large rivers; indeed, they seem not very solicitous about destroying it. The tusks, though of the finest ivory, are too small for the usual purposes to which they apply this article."

"Deep holes were dug along the side of the river in vast numbers, and most of them were covered over with so much care that they were not easily discoverable, which made it dangerous to ride along the sea-cow paths. One of our horses fell into a hole nine feet deep, which, fortunately, had no stake in it, otherwise he must inevitably have been killed. In what part soever we approached the river, hippopotami were snorting and playing in vast numbers. Of these animals our party killed four in one day. They were all very lean; a circumstance that was attributed to the locusts having devoured every green plant for a considerable distance from the banks of the river." (The usual weight of this animal is) "three or four thousand pounds."—*Travels in Southern Africa.*

ILLUSTRATION OF ISAIAH, xxiv. 17, 18.

Speaking of the robberies to which the inhabitants of African wilds are exposed, a traveller observes, "The inhabitants of these wilds cannot be induced to quit their present homes ; and they patiently submit to have their flocks and children taken from them, and their huts burnt, rather than seek a more secure residence in the larger towns. They have, however, a manner of defending themselves against their invaders, which often enables them to gratify their revenge. The ground is covered by the high grass and jungle close to the banks of the rivers, and they dig very deep circular holes, at the bottom of which are placed six or eight sharp stakes, hardened by the fire, over the top of which they most artfully lay the grass so as to render it impossible to discover the deception. An animal with its rider stepping on one of these traps is quickly precipitated to the bottom, and not unfrequently both are killed on the spot."

"The wood became much thicker, no pathway was to be discovered, and our guide declared that where we were he had not the least idea. A little further on we came to a complete stoppage ; brambles were wound round the before thickly-clustered branches of tulloh and prickly acacias ; and on removing, with great difficulty, some of those, we found the treacherous grass underneath merely covering blaquas (pits), large, deep, and well staked."

"In endeavouring to find a passage at a short distance, Dr. Oudney was very nearly precipitated, horse and all, into one of these graves for the quick. We were absolutely afraid to move."—DENHAM'S *Discoveries in Africa*.



BOAR IN THE VINEYARD.

BOAR.

PSALM lxxx. 13.

“The boar out of the wood doth waste it.”

“Presently we heard a hue and cry from all quarters, and soon perceived a large wild boar, with his bristles erect, beset by all the dogs ; everybody running eagerly to the pursuit. He was found behind one of the tents ; they chased him all through the camp, and two Arabs on horseback, with spears, soon joined in the pursuit. The animal, however, kept both men and dogs at bay, and finally got off with only one wound.”

“We passed a valley grubbed up in all directions in furrows by the wild boars ; the soil had all the appear-

ance of having been literally ploughed up.”—IRBY AND MANGLES, pp. 260, 275.

In his *Researches in Greece* the Rev. J. Hartley has the following passage. His friend, Mr. Leeves, was travelling in the dusk of the evening to Therapia. Passing a vineyard, he saw an animal of large size rush from among the vines, and cross the road with great precipitation. His attendant exclaimed, “Wild boar! wild boar!” “What has the wild boar to do in the vineyard?” asked Mr. Leeves. “Oh,” replied the Greek, “’tis the custom of wild boars to frequent the vineyards and to devour the grapes.” And it is astonishing what havoc a wild boar is capable of effecting during a single night. What with eating, and what with trampling under foot, he will destroy a vast quantity of grapes.—p. 234.

“We met a wild boar of great size; these animals are very common in the Ghor, and my companions told me that the Arabs of the valley are unable to cultivate the common barley, on account of the eagerness with which the wild swine feed upon it; they are therefore obliged to grow a less esteemed sort, which the swine do not touch.”—BURCKHARDT’S *Syria*, &c. p. 278.

A peasant in the village of Bayad, on the Blackwater (in the plain of the Araxes), “begged us to send him some powder and lead, that he might shoot for us some wild hogs, which were laying waste his rice-fields....The Blackwater has very marshy banks, extending for miles in some places, and covered with a tall and almost impenetrable growth of reeds. Here the wild hogs, of a dirty, darkish yellow-grey colour, lie concealed in great numbers, issuing forth at night to the rice-fields, on which they commit terrible devastations. The inhabitants, therefore, as soon as the rice begins to ripen, watch the fields at night, having dogs with them, which they set upon the hogs. On the evening of the same day, we made the villager conduct us to the rice-fields; we had scarcely gone a quarter of a mile from the vil-

lage, when we saw a sow with four young ones : we tried to creep upon them, but without success, our advance through the reeds making too much noise. A little further on, we found it necessary to cross an arm of the Blackwater. The water reached above the knee ; nevertheless, we waded through it at once, laughing at one another's wry faces, for the water was excessively cold, and there was no want of comic gestures. We sat a long hour on the watch, and heard the hogs frequently about us, but could not get sight of one, as it was, by this time, rather dark...(One of our men) came to us after some time ; he had shot a hog. The wild swine have beaten broad paths through the reeds, by which they go to the rice-fields. On one of these he had, daringly enough, taken his post, and had the luck to get a shot. The next morning, the hog was dragged into the village with a horse ; it was of goodly size, and must have weighed at least 280 pounds, for a pack-ox, on which it was placed, sank under the load ; and a good pack-ox will easily bear the above-mentioned weight." —PARROT'S *Journey to Ararat*, pp. 222—224.

" I left the remainder of the party to hunt the banks of the stream, which I knew in such a desolate country would be the resort of game. I had not proceeded far before I roused a large old sow, which, instead of running away, made directly at me, to the astonishment of the horse, which arose affrighted on its hind legs. I gave the view halloo to (my friends), who were only about half a mile distant, and firing a pistol in the face of my assailant, soon caused her to face about. My friends soon joined, and, holding the horse, I dismounted and ran into the jungle, not doubting but, from the sow's anger, I should find a litter ; and just as I reached the water's edge, the last of the young pigs had taken to the water. It was not deep, however, and I followed and caught him round the waist as he was endeavouring to climb up the opposite bank, and brought him back, a squalling but valuable prize...As we followed the course

of the rivulet, we roused numerous other boars, who came to swell the retinue of the old sow and her young ones... We succeeded in capturing two other pigs. It was with difficulty that we could collect enough dry thistles and rushes to make a fire large enough to broil a pig, but, after some labour, this was accomplished...

"We observed a great number of boars, with troops of young ones, coming down from the upland, where they had been feeding all night, and repairing to hide themselves during the day in the jungle. I secured one of these by stationing myself at the mouth of a ravine, where I had not been a few minutes before half-a-dozen pigs came grunting along within a few yards of me. Great was the dismay when I suddenly advanced upon the party, the different members of which galloped awkwardly away in various directions. Selecting one, however, of portable dimensions, I shot him through the body, and carried him off."—AINSWORTH'S *Asia Minor*, vol. ii. pp. 151, 153, 333.

Buckingham mentions that he made an excellent supper one evening of boar's flesh. "The manner of dressing the latter was by placing about twenty pieces of half an inch square on a long skewer, and turning it over the fire as on a spit, so that a few minutes were sufficient to roast it; and even in this rude way of preparing it, nothing could be more palatable."—BUCKINGHAM'S *Arab Tribes*, p. 148.

"From among the *woody* thickets by which we were surrounded, rushed forth two wild boars, nearly black, and seemingly ferocious. Their appearance was (so) wild... that we were pleased at their dashing across our path without attempting a stand; particularly as our horses, untrained to the sport of hunting the mountain boar, were much terrified at the sudden sight of these animals."—*Ibid.* p. 64.



CAMEL.

GEN. xxiv. 11.

“And he made his camels *to kneel down* without the city, by a well of water at the time of the evening...”

JOB i. 3.

“His substance also was...three thousand camels.”

ISAIAH xxx. 6.

“They will carry...their treasures upon the bunches of camels.”

lx. 6.

“The multitude of camels shall cover thee, the dromedaries of Midian and Ephah.”

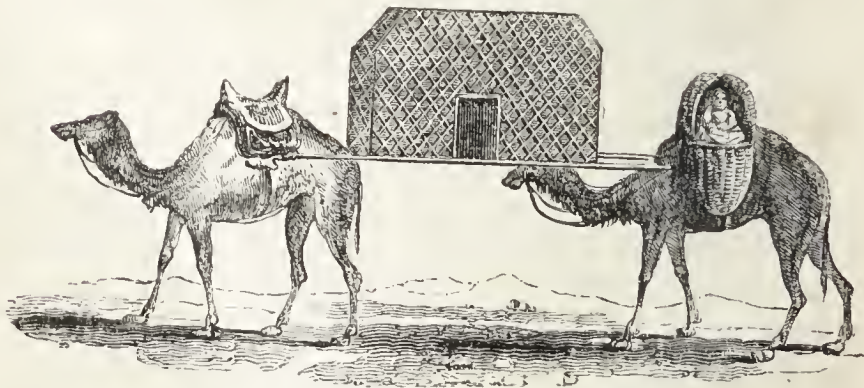
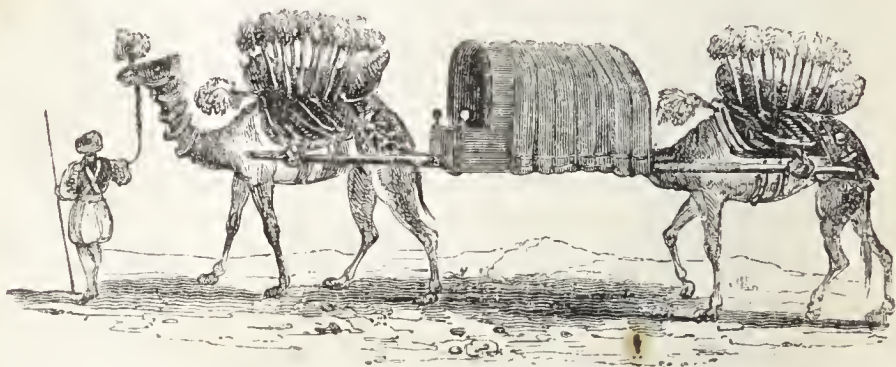
JEREMIAH ii. 23.

“Thou art a swift dromedary traversing her ways.”

Over the arid and thirsty deserts of Asia and Africa, the camel affords to man the only means of intercourse between one country and another. The camel has been created with an especial adaptation to the regions wherein it has contributed to the comfort, and even to the very existence, of man, from the earliest ages. It is formed to endure the severest hardships; its feet are made to tread lightly upon a dry and shifting soil; its nostrils have the capacity of closing, so as to shut out the driving sand, when the whirlwind scatters it over the desert; it is provided with a peculiar apparatus for retaining water in its stomach, so that it can march from well to well without great inconvenience, although they be several hundred miles apart. And thus, when a company of Eastern merchants cross from Aleppo to Bussora, over a plain of sand which offers no refreshment, the whole journey being eight hundred miles, the camel of the heavy caravan moves cheerfully along, with a burden of six or seven hundred weight, at the rate of twenty miles a day; while those of greater speed, that carry a man without much other load, go forward at double that pace and daily distance. Patient under his duties, he kneels down at the command of his driver, and rises up cheerfully with his load; he requires no whip or spur during his monotonous march; but, like many other animals, he feels an evident pleasure in musical sounds; and, therefore, when fatigue comes upon him, the driver sings some cheering snatch of his Arabian melodies, and the delighted creature toils forward with a brisker step, till the hour of rest arrives, when he again kneels down to have his load removed for a little while; and if the stock of food be not exhausted, he is further rewarded with a few mouthfuls of the cake of barley, which he carries for the sustenance of his master and himself. Under a burning sun, upon an arid soil, enduring great fatigue, and seldom completely slaking his thirst more than once during a progress of several hundred miles, the camel is patient and

apparently happy. He ordinarily lives to a great age, and is seldom visited by any disease.

Camels are of two species ; that with one hump is usually called the dromedary,—these are used for riding. The camel of the heavy caravan, the baggage-camel, may be compared to the dray-horse ; the dromedary to the hunter, and, in some instances, to the race-horse. Messengers on dromedaries, according to Burckhardt, have gone in eight days the same journey he has been twenty-two days accomplishing ; and there is an account of a swift dromedary recorded, who carried his rider from Mogadore to Morocco, the distance of one hundred miles, starting at dawn of day, and returning to Mogadore the same night, after the gates were shut.



CAMEL FURNITURE AND VEHICLES.

The average load of the heavy or slow-going camel, is from five hundred to six hundred pounds ; sometimes it

carries large panniers, filled with heavy goods; sometimes bales are strapped on his back, fastened with cordage made of the palm tree, or with leathern thongs; and sometimes two or more will bear a sort of litter, in which women and children ride with considerable ease.* The expense of maintaining these valuable creatures is remarkably little; a cake of barley, a few dates, or a handful of beans, will suffice, in addition to the hard and prickly shrubs which they find in every district but the very wildest of the desert. They are particularly fond of those vegetable productions which other animals would never touch, such as plants which are like spears and daggers in comparison with the needles of the thistle, and which often pierce the incautious traveller's boot. He might wish such thorns eradicated from the earth, if he did not behold the camel contentedly browsing upon them; for he thus learns that Providence has made nothing in vain. Their teeth are peculiarly adapted for such a diet. Differing from all other ruminating tribes, they have two strong cutting teeth in the upper jaw; and of the six grinding teeth, one on each side, in the same jaw, has a crooked form: their canine teeth, of which they have two in each jaw, are very strong; and in the lower jaw the two external cutting teeth have a pointed form, and the foremost of the grinders is also pointed and crooked. They are thus provided with a most formidable apparatus for cutting and tearing the hardest vegetable substance. But the camel is, at the same time, organized so as to graze upon the finest herbage, and browse upon the most delicate leaves; for his upper lip being divided, he is enabled to nip off the tender shoots, and turn them into his mouth with the greatest facility. Whether the sustenance, therefore, which he finds be of the coarsest or the softest kind, he is equally prepared to be satisfied with and to enjoy it.—See *Penny Magazine*, No. 63.

“I have been surprised to see what masses of timber

* Gen. xxxi. 17.

they carry down from these mountains on the backs of camels,—beams for houses, shipping, and all sorts of things. I have seen a beam from fifteen to twenty feet long, and from eight to ten, twelve, or fourteen inches in diameter, laid on the back of a camel, one end projecting forward before the head of the animal, and the other reaching far behind, and somehow fastened with ropes to the huge pack-saddle which he carries. Thus loaded, he is made to pass over roads which require some fortitude for a man to ride, and pass up and down descents that are most fearful for such loads : one driver attends each, who may at the more dangerous passes take hold of the beam, and aid in keeping it steady. The poor animal usually reaches his place of destination in safety with his timber. I say usually, for at times, overloaded or worn down with the length of the way, or missing his step, he falls, and is crushed to death by the merciless load upon his back.”—PAXTON’S *Letters*, pp. 35, 36.

“We noticed that when camels are sent out to feed they often stray over a wide surface. At the place where we now were, the reason alleged for keeping us till next day was, that the camels had been sent out to feed, and could not be found. A man had been sent upon a dromedary to look for them, but could not discover what direction they had taken. This circumstance reminded us of Saul being sent to seek his father’s asses, in days when the pastures of Israel may have been equally free.”—*Narrative of a Mission to the Jews*, pp. 88, 89.

“In our journeys betwixt Cairo and Mount Sinai, the heavens were every night our covering. Our camels *were made to kneel down* in a circle round about us, with their faces looking from us, and their respective loads and saddles placed behind them. In this situation, as they are very watchful animals, and awake with the least noise, they served us instead of a guard.”—SHAW’S *Barbary*, vol. i. p. 19.

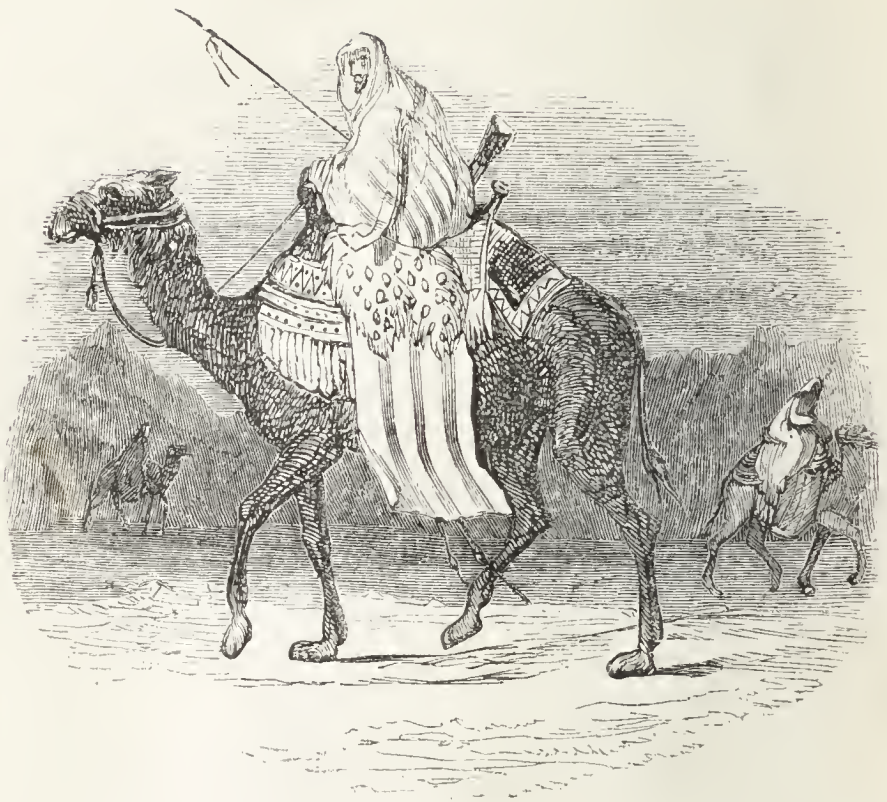
In some places, the Bedouins feed their horses principally upon camel's milk.*

"We met four camels heavily laden with ripe sheaves, each camel having bells of a different note suspended from its neck, which sounded cheerfully as they moved slowly on. Perhaps those bells may be a remnant of the 'joy in harvest,' though this is not the only time when they are used."—*Narrative of a Mission to the Jews*, p.106.

"We met many caravans of camels going to Suez. some with different sorts of merchandise. But what struck me most forcibly was, that these ships of the desert, these stately camels, with their picturesque-looking Bedouin drivers, were sometimes moving along under the burdens of *Newcastle coals* ! The steamers on the Red Sea, and, indeed, on all the route to Bombay, use English coal only; it is brought to Alexandria direct, and transported thence across the desert to Suez."—Hood's *Australia*, p. 436.

"(The) long, slow, rolling, or rocking gait (of the camel)" writes Dr. Robinson, "although not at first very unpleasant, becomes exceedingly fatiguing; so that I have often been more exhausted in riding five-and-twenty miles upon a camel, than in travelling fifty on horseback. Yet without them, how could such journeys be performed at all? ..But their home is the desert, and they were made, in the wisdom of the Creator, to be the carriers of the desert. The coarse and prickly shrubs of the wastes are to them the most delicious food, and even of these they eat but little. So few are the wants of their nature, that their power of going without food, as well as without water, is wonderful. They never appear to tire, but commonly march as freshly at evening as in the morning. The only instance I remember to the contrary, was after our long march to...., when my young camel, on arriving at the place of encampment, seemed weary, and lay down of its own accord in order to be relieved of its load. If they once begin to fail,

* Gen. xxxii. 15.



they soon lie down and die. Thus two camels of our train died..., which, a few hours before, had been travelling with full loads. In all our recent journey....the camels fed only upon shrubs, and never tasted grain of any kind; although once we had them loaded for thirty-six hours, during all which time they browsed only for one hour. Their well-known habit of lying down upon the breast to receive their burdens, is not, as is often supposed, merely the result of training; it is an admirable adaptation of their nature to their destiny as carriers. This is their natural position of repose, as is shown too by the callosities upon the joints of the legs, and especially that upon the breast, which serves as a pedestal beneath the huge body. Hardly less wonderful is the adaptation of their broad-cushioned foot to the arid sands and gravelly soil, which it is their lot chiefly to traverse. The camel, in very many respects, is not



unlike the sheep. They are a silly, timid animal, gregarious, and when alarmed, like sheep, they run and huddle all together. They are commonly represented as patient; but if so, it is the patience of stupidity. They are exceedingly impatient, and utter loud cries of indignation when receiving their loads, and not seldom on being made to kneel down. They are also obstinate, and frequently vicious; and the attempt to urge them forward is often very much like trying to drive sheep the way they do not choose to go. The cry of the camel resembles, in a degree, the hollow bleating of the sheep; sometimes it is like the lowing of cattle, or the hoarse squeal of the swine. But the Arabs heed not their cries; nor does the poor animal find much mercy at their hands. Heavy and galling loads and meagre fare are his appointed portion; and God has

hardened him to them... The singular power of the camel to go without water seems also to be of the same nature as that of the sheep, at least in its manifestation, although in a far greater degree. The dew, and the juice of grass and herbs, are sufficient for them in ordinary cases; though when the pasturage has become dry, the Arabs water their flocks every two days, and the camels every three. The longest trial to which we subjected our camels, in respect to water, was...four days; yet some of them did not drink even then, although they had only the driest fodder. But at all times the camel eats and drinks little; he is a cold-blooded, heavy, sullen animal, having little feeling and little susceptibility for pain. Thistles and briars and thorns he crops and chews with more avidity than the softest green fodder; nor does he seem to feel pain from blows or pricks, unless they are very violent.—There is nothing graceful or sprightly in any camel, old or young; all is mis-shapen, ungainly, and awkward. The young have nothing frisky or playful; but in all their movements are as staid and sober as their dams. As the carriers of the East, ‘the ships of the desert,’ another important quality of the camel is their sure-footedness. I was surprised to find them travelling with so much ease and safety, up and down the most rugged mountain passes. They do not choose their way with the like sagacity as the mule or even as the horse; but they tread much more surely and safely, and never either slip or stumble. In all our long journeys with them I do not recollect a single instance. The sounds by which the Arabs govern their camels are very few and very guttural. The signal for kneeling is not unlike a gentle snore; and is made by throwing the breath strongly against the palate, but not through the nose. That for stopping, is a sort of guttural clucking, which I could never master.” —ROBINSON’S *Researches*, vol. ii. pp. 632—635.



CHAMELEON.

LEVIT. xi. 29, 30.

“ These also shall be unclean unto you ... the chameleon,” &c.

“ While sailing on the Nile one of the boys of our crew brought on board a chameleon ; he caught it in an acacia tree, which they affect more than any other tree in this country. On coming on board, it hissed, and showed symptoms of anger, evincing at the same time a great desire to make its escape. It was then of a dirty green colour, with dark spots, and whenever it was approached it turned to a dusky brown, inflating itself at the same time. I conclude that one hue is the effect of

fear, and the other of indifference. We had subsequently eight of these animals on board; some of them became so tame, that when the flies annoyed us much, we had only to take one of the chameleons on our hand, and place it near the flies, and it would catch them with its long tongue in great numbers.”—IRBY AND MANGLES, p. 18.

“Among the new objects which first attracted our attention, were two live chameleons, one of the size of a large lizard. They were confined on a long narrow piece of board suspended between two strings, and had for security twisted their tails several times round. We were much amused with the changes in colour of these reptiles, and with seeing them feed. A fly, deprived of its wings, being put on the board, the chameleon soon perceives its prey, and untwirling its tail, moves towards it very gently and deliberately. When within distance, it suddenly seizes the poor insect, darting forward its tongue, a small long tube furnished with glutinous matter at the end, to which the fly adheres. This is done so nimbly and quietly, that we did not wonder it remained unobserved for ages, while the creature was idly supposed to subsist on air.”—CHANDLER’S *Travels in Asia Minor*, p. 58.

“This reptile is supposed to be always found of the same colour with the body on which it may happen to rest. Though in general this, perhaps, may be the case, yet the rule does not always hold good. I have seen it remain black for many minutes, on a white ground, and white when placed upon a black hat. Previous to its assuming a change of colour, it makes a long inspiration, the body swelling out to twice its usual size; and, as this inflation subsides, the change of colour gradually takes place. The only permanent marks are two small dark lines passing along the sides. The chameleons are characterized from the rest of the lizard tribe by their perching on the extremities of the branches of shrubby plants, from whence, holding themselves fast by their prehensile tails, with outstretched tongue they catch the

passing flies. Hence seems to have originated the idea that this class of reptiles lived upon air.”—*Travels in Southern Africa*.

“Of all the irascible little animals in the world, there are none so choleric as the *chameleon*. I trained two large ones to fight, and could at any time, by knocking their tails against one another, ensure a combat, during which their change of colour was most conspicuous. This change is only effected by paroxysms of rage, when the dark green gall of the animal is transmitted into blood, and is visible enough under its pellucid skin. The gall, as it enters and leaves the circulation, affords the three various shades of green which are observable in its colour. The story of the *chameleon* assuming whatever colour is near it, is, like that of its living upon air—a fable. It is extremely voracious. I had one so tame that I could place it on a piece of stick, opposite a window, and in the course of ten minutes I have seen it devour half a dozen flies. Its mode of catching them is very singular; the tongue is a thin cartilaginous dart, anchor-shaped; this it thrusts forth with great velocity, and never fails to catch its prey.

“The mechanism of the eye of the chameleon is extremely curious; it has the power of projecting the eye a considerable distance from the socket, and can make it revolve in all directions. One of them, which I kept for some months, deposited thirteen eggs in a corner of the room; each was about the size of a large coriander seed. The animal never sat on them. I took them away to try the effects of the sun, but from that period she declined daily in vivacity and soon after died.”—
DR. MADDEN.



THE CHAMOIS.

GIRAFFE, OR CAMEL-LEOPARD.

DEUTERONOMY xiv. 5.

“The chamois.”

It is supposed by some that the animal here meant is the giraffe, though others think that a species of goat is intended. It is *not* the animal called *chamois* in Switzerland, as that is not found so far south as Syria. The Hebrew word signifies to *crop branches*, to *browse*. The giraffe feeds upon the leaves of trees,—of those of

the acacia it is extremely fond,—it seizes them with its long narrow tongue, thus reaching those on branches too high for other animals to get hold of.

“We saw five giraffes (camel-leopards) to-day, to my great delight; they were the first I had seen alive, and, notwithstanding my fatigue and the heat, Bellal and myself chased them for half an hour; we kept within about twenty yards of them. They have a very extraordinary appearance from their being so low behind, and move awkwardly, dragging, as it were, their hinder legs after them: they are not swift.”

The Sheikh's wife “presented me with two fly-flappers, made of the tail of the camel-leopard.”—DENHAM'S *Africa*.

COCK-CROWING IN THE EAST.

MARK xiv. 30.

“In this night, before the cock crow twice, thou shalt deny me thrice.” (See also ch. xiii. 35.)

“It has been often remarked, in illustration of Scripture, that in the Eastern countries the cocks crow in the night; but the regularity with which they keep what may be called the watches, has not been, perhaps, sufficiently noticed. I will, however, confine myself to one, and that is between eleven and twelve o'clock. I have often heard the cocks of Smyrna crowing in full chorus at that time, and with scarcely the variation of a minute. The *second* cock-crowing is between one and two o'clock. Therefore, when our Lord says, ‘In this night, before the cock crow *twice*,’ the allusion was clearly to these seasons. In fact, this was altogether so novel to me at my first arrival in Smyrna, that I could calculate the hours of the night with as much precision, by what I termed my *alectrometer*,—as by my watch.”—ARUNDEL'S *Discoveries in Asia Minor*.



THE OUEBER.

CONEY.

SHAPHAN, WABBER, OR OUEBER.

PSALM civ. 18.

“The rocks (are a refuge) for the conies.”

PROVERBS xxx. 26.

“The conies are but a feeble folk, yet make they their houses in the rocks.”

There is good reason for believing that the animal called *coney*, in our version of the Scriptures, is the same with that now called *wabber*, or *oueber*, in Palestine and other parts. Laborde thus mentions it:—“Two of our guides set out upon an excursion, their guns on their shoulders, saying, that they would go and hunt the *oueber*, an animal commonly met with in this part of the mountain. In the course of a few hours they returned, bringing something wrapped up in their cloaks.

We saw by the merriment displayed on their countenances, that they had not been unlucky. They immediately produced four little animals, which they had found in their lair, being the whole of the family, the father and mother, and two young ones a fortnight old. These creatures, who are very lively in their movements, endeavoured to bite when they were caught; their hair is a brown yellow, which becomes pale and long as the animals grow old. In appearance, on account of the great vivacity of their eyes, the head being close to the shoulders, and the buttocks being drawn in, and without a tail, they resemble the guinea-pig. Their legs are all of the same height, but the form of their feet is peculiar; instead of nails or claws, they have three toes in front, and four behind, and they walk like rabbits on the whole length of the foot. The Arabs call it *El oueber*, and know no other name for it. It is common in this part of the country, and lives upon the scanty herbage with which the rain in the neighbourhood of springs supplies it. It does not burrow in the earth, its feet not being calculated for that purpose; but it conceals itself in the natural holes or clefts which it finds in the rocks.”—LABORDE, pp. 114, 115.

“When we were exploring the rocks in the neighbourhood of the convent, I was delighted to point attention to a family or two of the *oueber*, engaged in their gambols on the heights above us. Mr. Smith and I watched them narrowly, and were much amused with the liveliness of their motions, and the quickness of their retreat within the clefts of the rock when they apprehended danger. We were, we believe, the first European travellers who actually noticed this animal, now universally admitted to be the shaphan, or coney, of Scripture, within the proper bounds of the Holy Land; and we were not a little gratified by its discovery.... We climbed up to see its nest, which was a hole in the rock, comfortably lined with moss and feathers, answering to the description given of the coney. The specimen thus

obtained, when stuffed, I have had an opportunity of examining in England. The preparer of the skin mistook it for a rabbit, though it is of a stronger build, and of a duskier colour, being of a dark brown. It is entirely destitute of a tail, and has some bristles at its mouth, over its head, and down its back, along the course of which there are traces of light and dark shade. In its short ears, small, black, and naked feet, and pointed snout, it resembles the hedge-hog.”—WILSON’S *Lands of the Bible*.

CRANE.

ISAIAH xxxviii. 14.

“Like a crane, or a swallow, so did I chatter.”

“We shot several cranes, one of a beautiful white, with a yellow beak, and dark hazel eyes, with a yellow rim.”—*Discoveries in Africa*.

CROCODILE, OR ALLIGATOR.

JOB vii. 12.

“Am I a sea, or a whale, that thou settest a watch over me?”

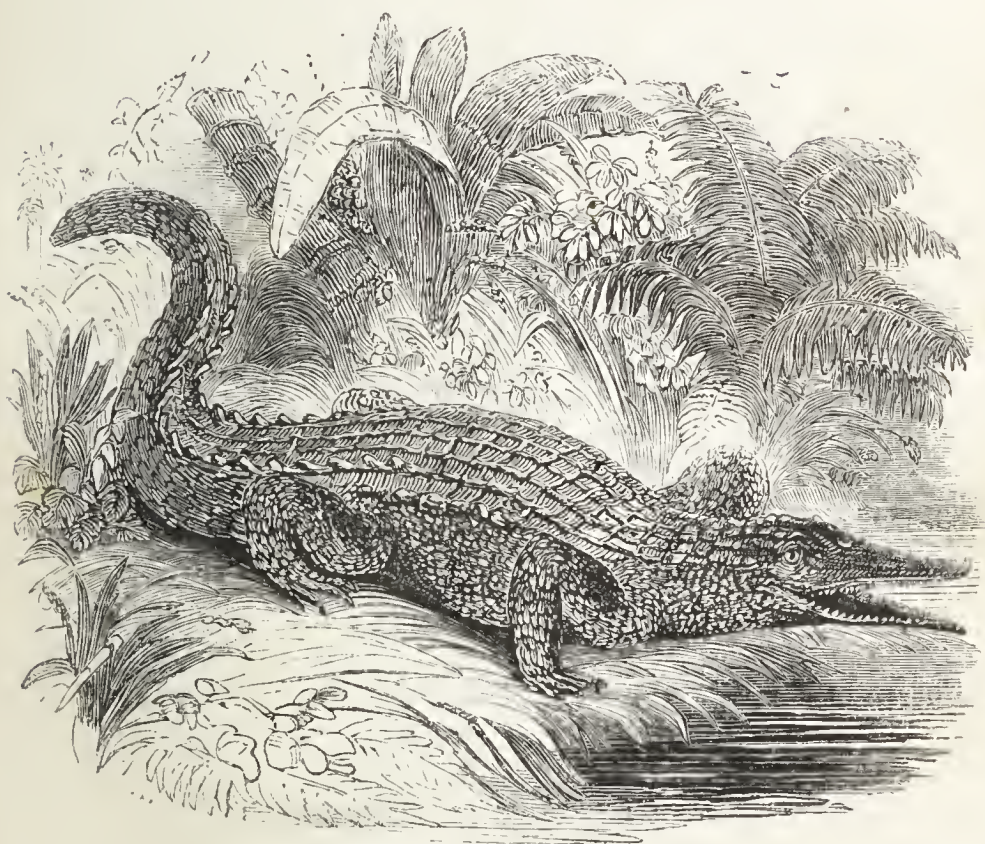
xli. 1, &c.

“Canst thou draw out leviathan with an hook? or his tongue with a cord which thou lettest down?...will he speak soft words unto thee?...Canst thou fill his skin with barbed irons?...his scales are his pride, shut up together as with a close seal. One is so near to another, that no air can come between them In his neck

remaineth strength...When he raiseth up himself, the mighty are afraid....Sharp stones are under him...he maketh the deep to boil like a pot; he maketh the sea like a pot of ointment. He maketh a path to shine after him; one would think the deep to be hoary. Upon earth there is not his like, who is made without fear."—See whole chapter.

PSALM lxxiv. 14.

"Thou brakest the heads of leviathan in pieces."



THE CROCODILE.

The river Nile, in its inundations, is sometimes dangerous, and requires to be *watched*, lest its waters should carry away *villages*, as has been the case. Of one of the greatest of these inundations ever known, an eye-witness has left the following history.

The Egyptians generally erect fences of earth, and reeds, and mounds also, around their villages, to protect them from the waters, but on this occasion all was vain. " Their cottages, built of earth, could not stand one instant against the current, and no sooner did the water reach them, than it levelled them with the ground. The rapid stream carried off all that was before it, men, women, and children ; cattle, corn, everything was washed away in an instant, and left the place where the village stood without anything to indicate that there had ever been a house on the spot. Egypt appeared to be in the midst of a vast lake containing various islands.....The village of Agalta was four feet below the water, and the poor people were *on watch* day and night round their



OVERFLOW OF THE NILE.

fences: if they should be broken down all was lost. We offered to take one with us, but he could not leave the place he was ordered to *guard*.

“ We saw several villages in great danger of being destroyed. The rapid stream had carried away the fences, and their unfortunate inhabitants were obliged to escape to higher grounds, where it was possible, with what they could save from the water. The distress of these people was great. Some crossed the water on pieces of wood—some on cows—and others with reeds tied up in large bundles. The small spots of high ground that stood above the water, formed so many sanctuaries, and were crowded with people and beasts. The scanty stock of provision they could save, was the only subsistence they could expect. In some parts the water had left scarcely any dry ground, and no relief could be hoped for till four-and-twenty days had elapsed. The chiefs of the country did everything they could to assist the villages with their little boats; but they were so small in proportion to what was wanted, that they could not relieve the greater part. It was distressing to behold these poor creatures in such a situation. To approach them with our little boat would have been dangerous both to them and to us; for so many would enter it at once, that the boat would sink, and we along with them.”—BELZONI’S *Travels*.

The word translated *whale*, in this passage, probably means a crocodile. This creature is extremely dangerous, being known to carry off even men on the borders of the Nile, and in some parts their numbers are so great, that they sometimes stop small troops of travellers. The Egyptians, therefore, *watch* them with great attention, in order to secure and slay them. Deep ditches are dug along the river, into which the crocodile may fall. Some bait them—others hide themselves in the places which they know to be frequented by this creature, and lay snares for him. Some are even bold enough to fix the dart in him while he sleeps. One of the inhabitants of Upper Egypt took one of them in the following novel and singular manner. “ He placed a very young boy in the spot where the day before a

crocodile had devoured a girl of fifteen, belonging to the governor of the place, who had promised a reward to any one who should bring him the animal dead or alive. The man at the same time concealed himself very near the child, holding a large board in his hand ; as soon as he perceived the crocodile had advanced near the child, he pushed his board into the open mouth of the creature, upon which his sharp teeth, which cross each other, entered into this board with such violence, that he could not disengage them, so that it was impossible for him after that to open his mouth."

The man secured him, and gained the reward.

The crocodile is possessed of extraordinary force. "A few days ago," writes a traveller, "they brought me one alive, a foot and a half long only. He was secured by a cord. I caused his snout to be set free, and he immediately turned to bite him that held him ; but he only seized on his own tail, into which his teeth entered so far, that it was necessary to make use of an iron instrument to open his mouth. This creature might be no more than a fortnight old. What might one of twenty or more feet do? I last year saw one of *twelve* feet, which had eaten nothing for thirty-five days, having his mouth inuzzled all that time. With one stroke of his tail, he threw down five or six men, and a bale of coffee, with perfect ease."—MAILLET. See HARMER'S *Observations*, vol. iii. pp. 514—517.

The description of the leviathan, or crocodile, in the Book of Job, exactly agrees with our accounts of that terrible creature. It devours fishing-tackle ; *two hooks* were found in one, which it had swallowed. Its length is about twenty feet, its breadth five ; it has the largest mouth of all monsters. It has nearly eighty sharp, strong, massy teeth—its voice is terrific—a loud, hollow growling—and it is furnished with a coat so scaly and callous as to resist the force of a musket-ball in every part, except under the belly. Its voracity and strength are enormous—it is very fleet in

swimming—attacks mankind and the largest animals with the most daring impetuosity—nothing that it once seizes can escape,—for, shaking its prey to pieces, it swallows it without mastication. So hard and impenetrable are the scales of the crocodile, that splinters of flint, sharp stones, are the same to him as the softest reeds. When he dives to the bottom, the agitation of the water may be justly compared to liquor boiling in a caldron; and his body being strongly impregnated with the scent of musk, the water is affected by it to a considerable distance: by his rapid passage through the water he makes it white with foam, in Job's expressive language, "one would think the deep to be hoary." By his tail he causes the waves to sparkle like a train of light. There is no creature among terrestrial animals so thoroughly dangerous, so exceedingly strong, so difficult to be wounded or slain, and perhaps there is no creature so totally destitute of *fear*.—Notes upon the forty-first chapter of Job, in the *Treasury Bible*.

"Several crocodiles, from eight to fifteen feet in length, were slumbering on the banks of the river Shary, which, on our near approach, rolled into the stream and disappeared in an instant."

"The flesh of the crocodile is extremely fine; it has a green, firm fat, resembling the turtle, and the callipee has the colour, firmness, and flavour of the finest veal."
—DENHAM'S *Africa*.

"We had entered a narrow part of the river, when the leadsman in the bow of the boat reported, "A large alligator coming down the stream, sir." We instantly grounded the boat on the right bank to keep her steady, and waited anxiously for the monster's approach. It will readily be believed, that every eye was fixed upon him as he slowly advanced, scarcely disturbing the glassy surface of the water, and quite unconscious of the fate that impended over him. At length he came abreast, and about eighty yards off, only the flat crown of his head and the partly-serrated ridge along his back ap-

pearing in sight. It was a moment of deep excitement for us all, and every one held his breath in suspense as I pointed my gun at the brute's head. I felt confident of hitting my mark; but, judging from the little effect I had produced on former occasions, scarcely dreamt of the execution my ball actually did. I fired—and never heard a ball strike with more satisfaction in my life. It laid the alligator sprawling, feet uppermost. There was no time to be lost in getting him on shore; two or three strokes with the oars brought us alongside of the monster, as he floated on the surface of the stream. The business was to attach a line to one of his legs; and as we knew that he was not dead, but only stunned, this was rather a nervous operation. I noticed, indeed, a hesitation among the men, as to who should venture, and fearing lest our prize should escape, I seized the line and made it fast to one of his forelegs, when we proceeded to the shore, dragging him alongside. Before reaching it, however, our friend gave signs of reviving animation, and as we could not foresee to what extent he might regain his activity, we dropped him astern, clear of the boat, fearing lest in floundering about he might stave in her broadside. In doing so, moreover, and by way of a sedative, I fired a charge of large shot at his head, the muzzle of the gun not being a yard from it; and yet the only effect produced was a slight stupor of the intellectual faculties, evinced by a momentary state of quiescence. On reaching the shore, the men jumped out to haul the alligator up on the dry land, and began to pull away vigorously. It was a comic scene to witness. They expected to have some difficulty in performing their task; but suddenly they found the rope slacken, and looking round beheld the alligator walking up after them of his own accord, faster than was pleasant. In their haste, one fellow tripped up; and it was for a moment a question whether he would not be snapped in two; the feeling of alarm, however, soon gave way to a sense of the ludicrous, at

beholding the manner in which he gathered himself up into a ball and rolled out of the alligator's way. I thought it now high time to take decisive measures, and with another shot altered the intentions of the monster, who endeavoured to back towards the water. It was not before he had received six balls in the head that he consented to be killed. During the operation he opened his mouth, that looked like a gigantic man-trap, and suddenly shut it with a loud snap, which made us shudder, and forcibly recalled to my mind the escape I had had a few days before, from having my body embraced by such a pair of jaws....All the alligator's stomach contained was about fourteen pounds of pebbles, some of them measuring four inches in diameter. We were some time skinning the monster, and after securing a little of the best parts of the flesh for eating, proceeded on our way....The writer supped off *alligator steaks*, and informs the reader that the meat is by no means bad, and has a white appearance like veal."—STOKE'S *Australia*, vol. ii. pp. 53—57.

“Several flights of large curlews were seen passing over the boat, and resting on the flats in its neighbourhood. Whilst endeavouring to procure some of them, I was placed in a sufficiently awkward position, running the risk of becoming myself a fresh meal, instead of procuring one. I had stripped to swim across a creek, and with gun in hand was stealthily crawling to the outer edge of the flat, where my intended victims were, when an alligator rose close by, bringing his unpleasant countenance much nearer than was agreeable. My gun was charged with shot, but as I could not procure a second load, to fire was useless, and to retreat difficult, for I had wandered from the boat some distance across the bank, on which the water was fast rising. Thought there was no time for; and before my companions could have reached me, the tide would have flooded the place sufficiently to enable the alligator to attack me at a disadvantage. My only chance of escaping the monster

was to hasten back to the boat, and to cross the last creek before the alligator, who appeared fully aware of my intentions. It was now, therefore, a mere matter of speed between us, and the race began. I started off with the utmost rapidity, the alligator keeping pace with me in the water. After a short and anxious race, I reached the last creek, which was now much swollen; while the difficulty of crossing was aggravated by my desire to save my gun. Plunging in, I reached the opposite shore just in time to see the huge jaws of the alligator extended close above the spot where I had quitted the water. My deliverance was providential; and I could not refrain from shuddering as I sat gaining breath upon the bank after my escape, and watching the disappointed alligator lurking about as if still in hopes of making his supper upon me. Waiting till the monster came close, I took a deliberate aim at his eye, which had only the effect of frightening him a little."—STOKE'S *Australia*, vol. ii. pp. 36, 37.

In some parts of Scripture we find the "great dragon," or leviathan, frequently used to represent the king of Egypt. In Isaiah xxvii. 1, he is called "the piercing serpent." Ezekiel calls Pharaoh "the great dragon that lieth in the midst of his rivers," (Ezekiel xxix. 3.) And in allusion to the destruction of the Egyptian host in the Red Sea, the Psalmist says, "Thou didst divide the sea by thy strength: thou brakest the heads of the dragons in the water: thou brakest the heads of leviathan in pieces, and gavest him to be meat to the people inhabiting the wilderness."



DOG.

PSALM lix. 14, 15.

“And at evening let them return, and let them make a noise like a dog, and go round about the city. Let them wander up and down for meat, and grudge if they be not satisfied.”

By the Jewish law the dog was an unclean animal, and much despised. Dogs were very numerous in the cities of the Jews. They were not shut up in their houses or courts, but wandered up and down, seeking food. They sometimes made great howlings, especially when oppressed by hunger.—CALMET.

The Turks reckon a dog an unclean creature, and therefore drive him from their houses. These animals

belong not, among them, to any particular owners, but rather guard the streets and districts than any house, living on the refuse that is thrown abroad.—RUSSELL.

The words, “At evening let them return,” alludes to the return of the dogs into the city, after their wandering in the suburbs and other places, in quest of prey.

In very ancient times dogs were looked upon as sacred ; and Herodotus says, that on the death of a dog in Egypt the people shaved their heads, and that the females were buried in consecrated chests when they die. “It was perhaps to prevent the Israelites from retaining any notion of this kind, that no dog was suffered to come within the precincts of their temple at Jerusalem.”—BRYANT.

By the ancient Jews, dogs were regarded in a disagreeable light. “Am I a dog?” said the Philistine to David. “What, is thy servant a dog?” said Hazael, &c. At the present day the people in the East avoid with care touching this animal in the streets ; and, indeed, it may be remarked, that in most countries and languages the word “dog” is a term of contempt.

“Every Eastern city is infested with dogs, that prowl about the streets for food ; and during all the night their ceaseless howling reminded us of David’s description of his enemies,—‘They return at evening ; they make a noise like a dog, and go round about the city.’”

“This night we remarked the howling of the dogs that prowl about the city. All foreigners are struck with their noise and unsightly appearance. They wander about the streets with fierce, hungry looks, and occasionally even attack the lonely passenger in the night. They answer precisely to the description given in the psalm.”—*Narrative of a Mission to the Jews*, pp. 48, 355.

“The dogs of the East have been immemorially noted for their watchfulness and furious noise at night ; and it forms a striking exhibition, as has been remarked, of the peace and quiet of the abodes of the Israelites, on

the awful night of the death of the firstborn of the Egyptians, when it is said, ‘There shall be a great cry throughout all the land of Egypt, such as there was none like it, nor shall be like it any more. But against any of the children of Israel shall not a dog move his tongue against man or beast,’ EXOD. xi. 6, 7.”—*Lands of the Bible.*

DOVE.

GENESIS viii. 9.

“The dove found no rest for the sole of her foot, and she returned unto him into the ark.”

PSALM lv. 6, 7.

“O, that I had wings like a dove ! for then would I flee away and be at rest. Lo, then would I wander far off, and remain in the wilderness.”

lxviii. 13.

“Though ye have lien among the pots, yet shall ye be as the wings of a dove covered with silver, and her feathers with yellow gold.”

CANTICLES v. 12.

“His eyes are as the eyes of doves.”

ISAIAH lx. 8.

“Who are these that fly as a cloud, and as the doves to their windows?”

JEREMIAH viii. 7.

“...The turtle...observe the time of their coming : but my people know not the judgment of the Lord.”

xlvi. 28.

“O ye that dwell in Moab, leave the cities, and dwell in the rock, and be like the dove that maketh her nest in the sides of the hole’s mouth.” [CANT. ii. 14.]

NAHUM ii. 7.

“Huzzab shall be led away captive...and her maids shall lead her, as with the voice of doves tabering upon their breasts.”—[ISA. lix. 11.]

MATTHEW x. 16.

“Be ye.. wise as serpents, and harmless as doves.”

In many villages (in Egypt) large pigeon-houses, of a square form, but with the walls slightly inclining inwards, or of the form of a sugar loaf, are constructed upon the roofs of the huts, with crude bricks, pottery, and mud.

The earthen pots used in the construction of these pigeon-houses, are of an oval form, with a wide mouth, which is placed outwards, and a small hole at the other end. Each pair of pigeons occupies a separate pot.—LANE'S *Modern Egyptians*, vol. i. p. 24, note.

“In the environs of the city of Ispahan, in Persia, are many pigeon-houses, erected at a distance from habitations, for the sole purpose of collecting pigeons' dung for manure. They are large round towers, rather broader at the bottom than the top, and crowned by conical spiracles, through which the pigeons descend. Their interior resembles a honey-comb, pierced with a thousand holes, each of which forms a snug retreat for a nest. More care appears to have been bestowed upon their outside than upon that of the generality of the dwelling-houses, (the exteriors of which are little studied,) for they are painted and ornamented. The extraordinary flights of pigeons which I have seen alight upon one of these buildings afford, perhaps, a good illustration for the passage in Isaiah:—‘Who are these that fly as a cloud, and as the doves to their windows?’ Their great numbers, and the compactness of their mass, literally look like a cloud at a distance, and obscure the sun

in their passage. The dung of pigeons is the dearest manure that the Persians use ; and as they apply it almost entirely for the rearing of melons, it is probably on that account that the melons of Ispahan are so much finer than those of other cities.”—MORIER’S *Second Journey through Persia, &c.*, pp. 140, 141.

“ We arrived at Beliane, a village of pigeon-houses, situated upon a hill, with groves of dates at each end. I have seen in the evening large flights of pigeons, which, when crossing the Nile on their return to their houses, alight on the water, and, after washing and refreshing themselves, again take wing.”

Mr. Madox speaks of taking up his residence in a house where the landlord and his family slept in a dark room, together with “ a number of pigeons *in pots* hanging over their heads, though the place was hardly high enough to stand upright in.”—*Excursions, &c.*, vol. i. pp. 268, 269, 404.

FLY.

EXODUS viii. 24.

“ There came a grievous swarm of flies into the house of Pharaoh, and...into all the land of Egypt ; the land was corrupted by reason of the swarm of flies.” [PSALM lxxviii. 45 ; cv. 31.]

2 KINGS i. 2.

“ Baal-zebub, the god of Ekron.”

The name of Baal-zebub signifies, Lord of the fly ; and to this idol the property of driving away flies was attributed. Flies in some parts are extremely destructive. The army of Richard the First, when in the Holy Land

rather near Hebron, "were assailed by a most minute kind of fly, flying about like sparks. With these the whole neighbouring region round about was filled. These most wretchedly infested the pilgrims, piercing with great smartness the hands, necks, throats, foreheads, and faces, and every part of the body that was uncovered; a most violent burning tumour following the punctures made by them, so that all that they stung looked like lepers. They could hardly guard themselves from this most troublesome vexation, by covering their heads and necks with veils."—See HARMER'S *Observations*, vol. iii. p. 310.

Abyssinia is visited by periodical rains, very violent, and of long continuance. "As soon as the fat black earth of the mountains of Abyssinia becomes saturated with water, immense swarms of flies burst into existence; and with the rains assist in driving almost every living creature from them. This insect, although it is scarcely larger than a common bee, becomes formidable from its immense numbers. Its wings are of pure gauze, without colour or spot upon them; the head is large, the upper jaw or lip is sharp, and has at the end of it a strong pointed hair; the lower jaw has two of these pointed hairs, and this pencil of hairs, when joined together, makes a resistance to the finger nearly equal to that of a strong hog's bristle. The buzzing sound of its arrival is no sooner heard than the cattle forsake their food, and run wildly about the plain, till they actually die from fear, pain, and fatigue. The camel, whose patience under every other affliction is proverbially unalterable, gets ungovernable from the violent punctures of these flies; his body becomes covered with lumps, which break and putrefy; and the wretched creature, termed by the Arabs the *ship of the desert*, founders, and dies. Even the rhinoceros and elephant, whose hides have been considered almost impenetrable to a musket-ball, are severely persecuted;...but they instinctively fortify themselves against the attack by wallowing in the mud and

mire, which, when dried by the sun, forms a fortress, which their enemies are unable to storm.....All the inhabitants...are obliged annually to quit the country of black earth, and, driving their cattle before them, to seek refuge in the cheerless sands of the desert ; and so many human beings and huge animals thus flying before an army of such little flies, certainly forms a very remarkable and wonderful feature in the great picture of nature.”—BRUCE’s *Travels*.

“We were annoyed (while travelling round the Dead Sea,) with large horse flies, which were in great numbers, and some of our animals were streaming with blood.”—IRBY AND MANGLES, p. 356.

“The air was filled with swarms of small flies, whose bite was very troublesome, so that we were glad to use every means to cover our faces. The camels, too, stung by these insects, became very restive, and for the first time almost ungovernable.”—*Mission to the Jews*, p. 115.

FOX.

JUDGES xv. 4, 5.

“And Samson went and caught three hundred foxes, and took fire-brands, and turned tail to tail, and put a fire-brand in the midst between two tails. And when he had set the brands on fire, he let them go into the standing corn of the Philistines, and burnt up both the shocks, and also the standing corn, with the vineyards and olives.”

CANTICLES ii. 15.

“The foxes, the little foxes, that spoil the vines.”

LAMENTATIONS v. 18.

“...The mountain of Zion...is desolate—the foxes walk upon it.”

EZEKIEL xiii. 4.

“O Israel, thy prophets are like the foxes in the deserts.”

MATTHEW viii. 20.

“Foxes have holes, and the birds of the air have nests ; but the Son of man hath not where to lay his head.”



SYRIAN FOX.

“As we crossed through the rich vineyards which skirt the hill upon which Gibeon stands, two foxes sprang out, and, crossing our path, ran into the corn-fields. The thick leafy shade of the vine conceals them from view, while the fruit allures them ; like the secret destroyers mentioned in the song...We saw before us, also, the mixture of standing corn and vineyards, from one to the other of which the foxes ran when Samson

set them loose...Herod is called by this name...a *destroyer of the Lord's vineyard*. It was in reference to this that Erasmus was once branded by the monks as a fox that laid waste the vineyard of the Lord."—*Narrative of a Mission of Inquiry to the Jews*, p. 203.

"A fox started from the bush and fled before us. It was to such an animal that Ezekiel referred, 'O Israel, thy prophets are like the foxes in the desert,' hungry, and anxious to find a prey."—P. 84.

The jackal is so common in Syria, that it is a question whether it was not the animal of which Samson procured three hundred, for the purpose of destroying



THE JACKAL.

the corn of the Philistines. The jackal goes out at dark, and hunts for prey all night, robbing hen-roosts, entering out-houses, examining doors and windows, feasting upon all dressed vegetables and ill-secured provisions,

digging their way into tombs, and in the fruit season seeking the vineyards with their neighbours, the foxes, and fattening upon grapes. They are found in large numbers together; sometimes as many as two hundred will be seen together, and their howl is most hideous and incessant. Their colour is dirty yellow, with brown ears.

Ainsworth writes that on one occasion they were followed by a troop of jackals, who ever and anon burst from the covert, as if to attack them, and then went running and howling away, chasing one another as if in play.—*Travels*, vol. i. p. 89.

“We heard the howling of wild beasts during the night, resembling the cries of human beings in distress. We supposed them to have been jackals.”—IRBY AND MANGLES, p. 168.

GOAT.

1 SAM. xxiv. 2.

“Saul...went to seek David and his men upon the rocks of the wild goats.”—[JOB xxxix. 1; PSALM civ. 18.]

PROVERBS xxvii. 27.

“Goats’ milk enough for thy food, for the food of thy household, and for the maintenance for thy maidens.”

CANT. iv. 1.

“Thy hair is as a flock of goats that appear from Mount Gilead.”

MATT. xxv. 32.

“And before Him shall be gathered all nations; and he shall separate them one from another, as a shepherd divideth his sheep from the goats.”

The Bedouins sell the large knotted horns of the rock-goat to the Hebron merchants, who carry them to

Jerusalem, where they are worked into handles for knives and daggers. Burckhardt saw a pair of horns at Kerek three feet long.



THE ROCK GOAT.

“As we passed along the valley, our sharp-sighted guides discovered a *Beden*, or mountain-goat, among the rocks on our left. One of them immediately started in pursuit; but, as he could approach him only on the windward side, the goat scented him, and dashed lightly along the side and up the face of the precipice, presenting a graceful object against the sky, with his long recurved horns and bounding leaps. The Arab began to mount after him with great agility, but was called back by his companions.”—ROBINSON’S *Researches*, vol. i. p. 117.

“As we approached the summit of the mountain we saw at a distance a small flock of mountain goats feeding among the rocks. One of our Arabs left us, and by a widely circuitous road endeavoured to get to leeward of them, and near enough to fire at them; he enjoined us to remain in sight of them, and to sit down, in order

not to alarm them. He had nearly reached a favourable spot behind the rock when the goats suddenly took to flight. They could not have seen the Arab; but the wind changed, and thus they smelt him. The chase of the *beden*, as the wild goat is called, resembles that of the chamois of the Alps, and requires as much enterprise and patience. The Arabs make long circuits to surprise them, and endeavour to come upon them early in the morning when they feed. The goats have a leader, who keeps watch, and, on any suspicious smell, sound, or object, makes a noise which is a signal to the flock to make their escape. They have much decreased of late, if we may believe the Arabs, who say that fifty years ago, if a stranger came to a tent, and the owner of it had no sheep to kill, he took his gun and went in search of a *beden*.....The flesh is excellent, and has nearly the same flavour as that of the deer. The Bedouins make water-bags of their skins, and rings of their horns, which they wear on their thumbs. When the *beden* is met with in the plains the dogs of the hunters easily catch him; but they cannot come up with him among the rocks, where he can make leaps of twenty feet."

"I must not forget the delicious goats' milk of Djenia, (cows' milk is not to be had,) a foaming vessel of which was brought to us morning and evening, just milked in view of our tents; more than a quart for twopence.

"At sunset we encamped under some fig-trees, near the well or fountain, where we immediately got fresh goats' milk from the flocks, and most refreshing it was after our long day."*—*Jewish Intelligence for March*, 1847.

* For further particulars of the Goat see "FLOCKS AND HERDS."



HORSE.

PSALM xxxiii. 17.

“An horse is a vain thing for safety: neither shall he deliver any by his great strength.”

ZECH. xiv. 20.

“In that day shall there be upon the bells of the horses, *Holiness unto the Lord!*”

REVELATION xix. 11, 14.

“And I saw Heaven opened, and behold, a white horse; and he that sat upon him was called Faithful and True...And the armies which were in Heaven followed him upon white horses, clothed in fine linen, white and clean.” [ZECHARIAH x. 3.]

JOB xxxix. 19–25.

“Hast thou given the horse strength? Hast thou clothed his neck with thunder? Canst thou make him

afraid as a grasshopper? The glory of his nostrils is terrible. He paweth in the valley, and rejoiceth in his strength: he goeth on to meet the armed men. He mocketh at fear, and is not affrighted; neither turneth he back from the sword. The quiver rattleth against him, the glittering spear and the shield. He swalloweth the ground with fierceness and rage: neither believeth he that it is the sound of the trumpet. He saith among the trumpets, ha, ha; and he smelleth the battle afar off, the thunder of the captains, and the shouting."

The Arabian horses are justly esteemed for their remarkable hardiness, swiftness, and beauty. Mr. Stephens says of one of them, the property of the sheikh of the tribe of Arabs he was then with—"The sheikh's was an extraordinary animal. The saddle had not been off her back for thirty days; and the sheikh, himself a most restless creature, would dash off suddenly a dozen times a day, on a full run across the valley, up the sides of a mountain, round and round our caravan, with his long spear poised in the air, and his dress streaming in the wind; and when he returned and brought her to a walk at my side, the beautiful animal would snort and paw the ground as if proud of what she had done, and anxious for another course. I could almost imagine I saw the ancient war-horse of Idumea so finely described by Job."—*Incidents of Travel*, vol. ii. pp. 111, 119.

"The finest race of Arabian blood-horses may be found in Syria. I am induced to suspect that very few true Arabian horses, and still less any of the first rate among them, have ever been imported into England, although many have passed under the name of Arabs.

"The *Egyptian* horse is ugly, and of a coarse make, resembling more a coach horse than a racer. His chief defects are, clumsy legs and knees, and a short and thick neck. The head is sometimes fine, but I never saw an Egyptian horse having handsome legs. They are not



INTERIOR OF AN ARAB DWELLING.

able to bear any considerable fatigue; but those that are well fed display much more brilliant action than the Arabian horses; their impetuosity renders them particularly desirable for heavy cavalry, and it is from this quality of the horse that the Egyptian cavalry have always founded their claim to celebrity. In their first onset the Egyptian horses are much superior to the Arabian; but when long marches become necessary, and the duties of light cavalry required, the Egyptian prove infinitely less useful. Egyptian horses are much less gentle in their temper than the Arabians; they are often vicious,—the Arabians scarcely ever,—and require to be constantly tied, while the Arab horses wander freely and quietly about the camps like camels. I have seen vicious horses in Egypt cured of the habit of biting, by presenting to them, while in the act of doing so, a leg of mutton just taken from the fire: the pain a horse feels in biting through the hot meat causes it, after a

few lessons, to abandon the vicious habit. The Bedouins receive the newly born horse in their arms, and so cherish it for several hours, occupied in washing and stretching its tender limbs, and caressing it as they would a baby. After this they place it on the ground, and watch its feeble steps with particular attention, prognosticating from that time the excellences or defects of their future companion.



“A troop of Druses on horseback attacked, in the summer of 1815, a party of Bedouins in Hauran, and drove them into their encampment, where they were in turn assailed by a superior force, and all killed except one man, who fled. He was pursued by several of the best mounted Bedouins; but his mare, although fatigued, continued her speed for several hours, and could not be overtaken. Before his pursuers gave up the chase, they cried out to him, promising quarter and safe conduct,

and begging that he would allow them to kiss the forehead of his excellent mare. Upon his refusal, they desisted from pursuing, and blessing the generous creature, they exclaimed, addressing her owner, ‘Go and wash the feet of your mare, and drink up the water.’ This expression is used by the Bedouins to show their great love for such mares, and their sense of the services which they have rendered.”—BURCKHARDT’S *Notes*, &c., vol. ii.

“The wealth of the Arab consists in flocks and herds; but his pride and power lie in his *horse*. These are noble animals, and are no less remarkable for their



chivalrous disposition than for their strength and endurance: gallant, yet docile; fiery, yet gentle; full of mettle, yet patient as a camel; they are very ferocious to each other, but suffer little children to pull about and play with them. Their beauty is not remarkable, at least to an English eye. ...The head is beautiful: the expansive forehead, the brilliant, prominent eye, and the delicately shaped ear, would testify to nobleness in any animal. ...I have been on the same horse for twenty-four hours on one occasion, and for upwards of thirty on another, without any rest or refreshment, except once, for half an hour, when a few handfuls of barley were the only food. Some of my young naval friends used to

ride the same horse at a gallop...about sixty miles, over roads...that it would appear impossible to an English horse to climb.”—*Crescent and Cross*, vol. ii. pp.172,173.

Moses expressly forbade the Israelites to multiply horses, because this would oblige them to send into Egypt, with which country they were forbidden to hold any intercourse, lest they should follow its idolatries. Solomon first broke this law, and the consequences were such as had been foretold. Isaiah afterwards reproves the Jews for their obstinacy in seeking help from Egypt, contrary to God’s will and commandment; and declares that a righteous punishment shall come upon them; “Ye said no; for we will flee upon horses; therefore shall ye flee; and we will ride upon the swift; therefore shall they that pursue you be swift.”—See Deut. xvii. 16; 1 Kings iv. 26; 2 Chron. ix. 28; Isaiah xxx. 1, 2, 16.

HYÆNA.

JEREMIAH xii.

“My heritage is unto me as a speckled bird.”

The term here rendered *speckled bird*, is considered by most interpreters to mean properly the hyæna; a singularly fierce and cruel animal. Some suppose that the passage in 1 Sam. xiii. 18, should be translated “Valley of Hyænas,” instead of “Valley of Zeboim.”

“The hyænas, which are everywhere in legions, grew now so extremely ravenous, that a good large village, where I sometimes procured a draught of sour milk on my duck-shooting excursions, had been attacked the night before my last visit, the town absolutely carried by storm, notwithstanding defences nearly six feet high of branches of the prickly tulloh, and two donkeys, whose flesh these animals are particularly fond of, carried off

in spite of the efforts of the people. We constantly heard them close to the walls of our own town at nights, and on a gate being left partly open, they would enter, and carry off any unfortunate animal that they could find in the streets.”...



THE HYÆNA.

“The hyænas came so close to the tents last night, that a camel, which lay about a hundred yards from the enclosure, was found nearly half eaten. A lion first made a meal on the poor animal, when the hyænas came down upon what he had left. We had fires the whole night; and notwithstanding the continued howlings which these animals kept up until daylight, our rest was but little disturbed.”

“The hyænas were here so numerous, and so bold, as to break over the fence of bushes in the middle of a thunder-storm, and carry off a sheep from within five yards of my tent.”—DENHAM'S *Africa*.



KANGFUD—(PORCUPINE).

ISAIAH xxxiv. 11.

“The bittern shall possess it.”

“We learnt that a rough, hairy animal, which we understood to be the porcupine, abounds in Wady Mousa, and that the Arabs call it *kangfud*, which is evidently the Hebrew word used in Isaiah xxxiv. 11, though translated *bittern* in our version.”—*Narrative of a Mission to the Jews*, p. 54.

“Dr. Keith tried to ascertain from (the Bedouin chief) the fact of porcupines being found in Petra ; he asked him what the *kangfud* was, when the Bedouin imme-

diately imitated the cry it uttered, and on being shown a porcupine quill, at once recognised it as belonging to the *kangfud*.—*Ibid.*, p. 138.



LEOPARD.

SONG OF SOLOMON iv. 8.

“The mountains of the leopards.”

ISA. xi. 6.

“The leopard shall lie down with the kid.”

JER. v. 6.

“A leopard shall watch over their cities.”

xiii. 23.

“Can the Ethiopian change his-skin, or the leopard his spots?”

HOSEA xiii. 7.

“ As a leopard by the way will I observe them.”

HABAKKUK i. 8.

“ Their horses also are swifter than the leopards.”

“ The leopard, under the name of *nimr*, which it still retains, is frequently mentioned in Scripture, so as to show that it was in ancient times not uncommon in the country from which it has not yet disappeared. From its fierceness, it is often found with the lion ; and, from the same character, emphasis is given to the description of the blessedness of a coming time by the declaration that then ‘ the leopard shall lie down with the kid.’ There are allusions to its lying in wait near towns and beside the public ways, to surprise unwary travellers ; as well as to the acuteness of the animal, and to its spots. Solomon speaks of ‘ the mountains of the leopards ;’ and in the Scriptural topography of Palestine several names occur, which, being formed from the name of the leopard (*nimr*), appear to intimate that the localities indicated were the peculiar haunts of these animals. It is even not unlikely that ‘ the mighty hunter,’ *Nimrod*, derived his name from this animal.”

“ During the latter part of the night, we had started several animals of the leopard species, who ran from us so swiftly, twisting their long tails in the air, as to prevent our getting near them. We, however, now started one of a larger kind, which Maramy assured me, was so satiated with the blood of a negro, whose carcass we found lying in the wood, that he would be easily killed. I rode up to the spot just as a Shouaa had planted the first spear in him, which passed through the neck, a little above the shoulder, and came down between the animal’s legs ; he rolled over, broke the spear, and bounded off with the lower half in his body. Another Shouaa galloped up within two arms’ length, and thrust a second through his loins ; and the savage animal, with a

woful howl, was in the act of springing on his pursuer, when an Arab shot him through the head with a ball, which killed him on the spot. It was a male panther,* of a very large size, and measured from the point of the tail to the nose, eight feet two inches ; the skin was yellow, and beautifully marked with...spots...These animals are found in great numbers in the woods bordering on Mandara ; they are as insidious as they are cruel : they will not attack any thing that is likely to make resistance, but have been known to watch a child for hours, while near the protection of huts or people. It will often spring on a grown person when carrying a burden, but always from behind : the flesh of a child or of a young kid it will sometimes devour ; but when any full grown animal falls a prey to its ferocity, it sucks the blood alone.”—DENHAM's *Africa*.

“ I am induced to send you some account of a panther which was in my possession for several months. He and another were found when very young in the forest, apparently deserted by their mother. They were taken to the king of Ashantee, in whose palace they lived several weeks, when my hero, being much larger than his companion, suffocated him in a fit of romping, and was then sent to Mr. Hutchinson, the resident left by Mr. Bowditch at Coomassie. This gentleman observing that the animal was very docile, took pains to tame him, and in a great measure succeeded. When he was about a year old, Mr. Hutchinson returned to Cape Coast, and had him led through the country by a chain, occasionally letting him loose when eating was going forward, when he would sit by his master's side, and receive his share with comparative gentleness. Once or twice he purloined a fowl, but easily gave it up to Mr. Hutchinson on being allowed a portion of something else. The day of his arrival he was placed in a small court leading to the private rooms of the governor, and

* The leopard and panther are so nearly allied, that it is a question whether they are not the same animal.

after dinner was led by the ear into the room, where he received our salutations with some degree of roughness, but with perfect good humour. On the least encouragement, he laid his paws upon our shoulders, rubbed his head upon us, and his teeth and claws having been filed, there was no danger of tearing our clothes. He was kept in this court for a week or two, and evinced no ferocity, except when one of the servants tried to pull his food from him ; he then caught the offender by the leg, and tore out a piece of flesh : but he never seemed to owe him any ill will afterwards. He one morning broke his cord, and the cry being given, the castle gates were shut, and a chase commenced. After leading his pursuers two or three times round the ramparts, and knocking over a few children by bouncing against them, he suffered himself to be caught and led quietly back to his quarters, under one of the guns of the fortress.

“By degrees the fear of him subsided, and orders having been given to the sentinels to prevent his escape through the gates, he was left at liberty to go where he pleased, and a boy was appointed to prevent him from intruding into the apartments of the officers. His keeper, however, generally passed his watch in sleeping, and Sai, as the panther was called, after the royal giver, roamed at large. On one occasion, he found his servant sitting on the step of a door, upright, but fast asleep ; when he lifted his paw, gave him a blow on the side of the head, which laid him flat, and then stood wagging his tail, as if enjoying the mischief he had committed. He became exceedingly attached to the governor, and followed him everywhere like a dog. His favourite station was at the window of the sitting-room, which overlooked the whole town : there, standing on his hind-legs, his fore-paws resting on the ledge of the window, and his chin laid between them, he appeared to amuse himself with what was passing beneath. The children also stood with him at the window ; and,

one day, finding his presence an incumbrance, and that they could not get their chairs close, they used their united efforts to pull him down by the tail. He one morning missed the governor, who was settling a dispute in the hall, and who, being surrounded by black people, was hidden from the view of his favourite. Sai wandered with a dejected look to various parts of the fortress in search of him, and while absent on this errand, the audience ceased; the governor returned to his private rooms, and seated himself at a table to write. Presently he heard a heavy step coming up stairs, and, raising his eyes to the open door, he beheld Sai. At that moment he gave himself up for lost, for Sai immediately sprang from the door on to his neck. Instead, however, of devouring him, he laid his head close to the governor's, rubbed his cheek upon his shoulder, wagged his tail, and tried to evince his happiness. Occasionally, however, the panther caused a little alarm to the other inmates of the castle, and the poor woman who swept the floors, or, to speak technically, the *prapra*-woman, was made ill by her fright. She was one day sweeping the floors of the great hall, with a short broom, and in an attitude nearly approaching to all-fours, and Sai, who was hidden under one of the sofas, suddenly leaped upon her back, where he stood in triumph. She screamed so violently as to summon the other servants; but they, seeing the panther, as they thought, in the act of swallowing her, one and all scampered off as quickly as possible; nor was she relieved till the governor, who heard the noise, came to her assistance. Strangers were naturally uncomfortable when they saw so powerful a beast at perfect liberty, and many were the ridiculous scenes which took place; they not liking to own their alarm, yet perfectly unable to retain their composure in his presence.

“This interesting animal was well fed twice every day, but never given anything with the life in it. He stood about two feet high, and was of a dark yellow

colour, thickly spotted with black rosettes ; and from the good feeding, and the care taken to clean him, his skin shone like silk. The expression of his countenance was very animated and good-tempered, and he was particularly gentle to children ; he would lie down on the mats by their side when they slept ; and even the infant shared his caresses and remained unhurt. During the period of his residence at Cape Coast, I was much occupied by making arrangements for my departure from Africa, but generally visited my future companion every day, and we in consequence became great friends before we sailed. He was conveyed on board the vessel in a large wooden cage thickly barred in front with iron. Even this confinement was not deemed a sufficient protection by the canoe-men, who were so alarmed at taking him from the shore to the vessel, that in their confusion they dropped cage and all into the sea. For a few minutes I gave up my poor panther as lost ; but some sailors jumped into a boat belonging to the vessel, and dragged him out in safety. The beast himself seemed completely subdued by his ducking ; and as no one dared to open his cage to dry it, he rolled himself up in one corner, nor roused himself till after an interval of some days, when he recognized my voice. When I first spoke, he raised his head, held it on one side, then on the other, to listen, and when I came fully into his view, he jumped on his legs and appeared frantic : he rolled himself over and over, he howled, he opened his enormous jaws, and cried, and seemed as if he would have torn his enormous cage to pieces. However, as his violence subsided, he contented himself with thrusting his paws and nose through the bars of the cage to receive my caresses. I suspect that he had suffered from sea-sickness, as he had apparently loathed all food ; but after this period he ate everything that was given to him.

“The greatest treat I could bestow upon my favourite was lavender-water. Mr. Hutchinson had told me that, on the way from Ashantee, he drew a scented handker-

chief from his pocket, which was immediately seized on by the panther, who reduced it to atoms ; nor could he venture to open a bottle of perfume when the animal was near, he was so eager to enjoy it. I indulged him twice a week by making a cup of stiff paper, pouring a little lavender water into it, and giving it him through the bars of his cage : he would drag it to him with great eagerness, roll himself over it, and not rest till the smell had evaporated. By this I taught him to put out his paws without showing his nails, always refusing the lavender water till he had drawn them back again ; and in a short time he never on any occasion protruded his claws when offering me his paw.

“ We lay eight weeks in the river Gaboon, where he had plenty of excellent food, but was never suffered to leave his cage, on account of the deck being always filled with black strangers, to whom he had a very decided aversion, although he was perfectly reconciled to white people. His indignation, however, was constantly excited by the pigs, when they were suffered to run past his cage ; and the sight of one of the monkeys put him in a complete fury. While at anchor in the before-mentioned river, an orang-outang was brought for sale, and lived three days on board ; and I shall never forget the uncontrollable rage of the one, or the agony of the other, at this meeting. The orang-outang was about three feet high, and very powerful in proportion to his size ; so that when he fled with extraordinary rapidity from the panther to the farther end of the deck, neither man nor things remained upright when they opposed his progress there : he took refuge in a sail, and, although generally obedient to the voice of his master, force was necessary to make him quit the shelter of its folds. As to the panther, his back rose in an arch ; his tail was elevated and perfectly stiff ; his eyes flashed, and as he howled, he showed his huge teeth : then, forgetting the bars before him, he tried to spring on the orang, to tear him to atoms. It was long before he re-

covered his tranquillity ; day and night he appeared to be on the listen, and the approach of a large monkey we had on board, or the intrusion of a black man, brought a return of his agitation.

“ We at length sailed for England with an ample supply of provisions ; but, unhappily, we were boarded by pirates during the voyage, and nearly reduced to starvation. My panther must have perished, had it not been for a collection of more than three hundred parrots with which we sailed from the river, and which died very fast while we were in the north-west trades. Sai’s allowance was one per diem ; but this was so scanty a pittance, that he became ravenous, and had not patience to pick all the feathers off before he commenced his meal. The consequence was, he became very ill, and refused even this small supply of food. Those around tried to persuade me that he suffered from the colder climate ; but his dry nose and paws convinced me that he was feverish ; and I had him taken out of his cage, when, instead of jumping about and enjoying his liberty, he lay down and rested his head upon my feet. I then made him three pills, each containing two grains of calomel. The boy who had the charge of him, and who was attached to him, held his jaws open, and I pushed the medicine down his throat. Early the next morning I went to visit my patient, and found his guard sleeping in the cage with him ; and, having administered a further dose to the invalid, I had the satisfaction of seeing him perfectly cured by the evening. On the arrival of the vessel in the London Docks, Sai was taken ashore, and presented to the Duchess of York, who placed him in Exeter Change, to be taken care of till she herself went to Oatlands. He remained there for some weeks, and was suffered to roam about the greater part of the day without any restraint. On the morning previous to the Duchess’s departure from town, she went to visit her new pet, played with him, and admired his healthy appearance and gentle deportment. In the

evening, when Her Royal Highness's coachman went to take him away, he was dead, in consequence of an inflammation on his lungs."—LOUDON'S *Magazine of Natural History*.



LION.

PROVERBS xxx. 29, 30.

“There be three things which go well, yea, four are comely in going : a lion which is strongest among beasts, and turneth not away for any.”

ISAIAH xi. 7.

“The lion shall eat straw like the ox.”

EZEKIEL xix. 6, 8.

"[He] became a young lion, and learned to catch the prey. ...Then the nations set against him...and spread their net over him : he was taken in their pit." [PSALM ix. 15 ; NAHUM ii. 11, 12.]

AMOS iii. 8.

"The lion hath roared, who will not fear?"

1 PETER v. 8.

"Be sober—be vigilant : because your adversary the devil, as a roaring lion, walketh about, seeking whom he may devour." [MICAH v. 8.]

"The skin of a noble lion was sent me by the Sheikh ...measuring from the tail to the nose fourteen feet two inches. He had devoured four slaves, and was at last taken by the following stratagem : the inhabitants assembled together, and with loud cries and noises drove him from the place where he had last feasted : they then dug a very deep circular hole, armed with sharp-pointed stakes : this they most cunningly covered with stalks of the japut (millet). A bundle of straw, enveloped in a (mantle) was laid over the spot, to which a gentle motion, like that of a man turning in sleep, was occasionally given by means of a line carried to some distance. On their quitting the spot, and the noise ceasing, the lion returned to his haunt, and was observed watching his trap for seven or eight hours, by degrees approaching closer and closer—and at length he made a dreadful spring on his supposed prey, and was precipitated to the bottom of the pit. The people now rushed to the spot, and before he could recover himself despatched him with their spears."—DENHAM'S *Africa*.

"Amongst other articles offered me for sale was a young lion—who walked about with great unconcern, confined merely by a small rope round his neck held by the

negro, who had caught him when he was not two months old, and having had him for a period of three months, now wished to part with him : he was about the size of a donkey-colt, with very large limbs, and the people seemed to go very close to him without much alarm, notwithstanding he struck with his foot the leg of one man who stood in his way, and made the blood flow copiously : they opened the ring which was formed round this noble animal as I approached ; and coming within two or three yards of him, he fixed his eye upon me in a way that excited sensations I cannot describe, from which I was awakened by the fellow calling me to come nearer, at the same time laying his hand on the animal's back ; a moment's recollection convinced me that there could be no more danger nearer than where I was, and I stepped boldly up beside the negro, and I believe should have laid my hand on the lion the next moment ; but after looking carelessly at me, he brushed past my legs, broke the ring, and pulled his conductor away with him, overturning several who stood before him, and bounded off to another part where there were fewer people."—*Discoveries in Africa*, vol. i. pp. 219, 220.

The roaring of a lion in quest of his prey resembles the sound of distant thunder, and being re-echoed by the rocks and mountains, appals the whole race of animals, and puts them instantly to flight ; but he frequently varies his voice into a hideous scream or yell. "When the lion roars, the beasts of the field can do nothing but quake ; they are afraid to lie still in their dens, lest he spring upon them, and equally afraid to run, lest, in attempting to escape, they should take the direction in which he is prowling, and throw themselves into the jaws of their adversary."—*Voyage to the Cape of Good Hope*.

"Fire is what the lions are more afraid of ; yet, notwithstanding all the precaution of the Arabs in this respect ; notwithstanding the barking of their dogs, and their own repeated cries and exclamations during the

night, when they are suspected to be upon the prey, it frequently happens that these ravenous beasts, outbraving all these terrors, will leap into the midst of the place where the cattle are inclosed, and drag from thence a sheep or a goat. If these ravages are repeated, then the Arabs dig a pit, where they are observed to enter, and covering it over slightly with reeds, or small branches of trees, they frequently decoy and catch them. The flesh of the lion is in great esteem, having no small affinity with veal, both in colour, taste, and flavour.”—SHAW’S *Travels*, p. 245.

“A farmer advised us to make fast our oxen to the waggons, as two of his horses had been devoured on the preceding night by lions. (This animal is) treacherous, because it seldom makes an open attack, but lies in ambush till it can conveniently spring upon its prey...The lion, in fact, is one of the most indolent of all the beasts of prey, and never gives himself the trouble of a pursuit unless hard pressed with hunger.”—BARROW’S *Southern Africa*.

LOCUST.

EXODUS x. 12—15, 19.

“And the Lord said unto Moses, stretch out thine hand over the land of Egypt for the locusts, that they may come up upon the land of Egypt, and eat every herb of the land, even all that the hail hath left. And Moses stretched forth his rod over the land of Egypt, and the Lord brought an east wind upon the land all that day, and all that night; and when it was morning, the east wind brought the locusts. And the locusts went up over all the land of Egypt, and rested in all the coasts of Egypt: very grievous were they; before them there were no such locusts as they, neither after them

shall be such. For they covered the face of the whole earth, so that the land was darkened ; and they did eat every herb of the land, and all the fruit of the trees which the hail had left : and there remained not any green thing in the trees, or in the herbs of the field, through all the land of Egypt....And the Lord turned a mighty strong west wind, which took away the locusts, and cast them into the Red Sea."

JEREMIAH li. 14.

"Surely I will fill thee with men, as with caterpillars, and they shall lift up a shout against thee."

JOEL i. 4, 12.

"That which the palmar-worm hath left, hath the locust eaten."

"The vine is dried up, and the fig-tree languisheth ; the pomegranate-tree, the palm-tree also, and the apple-tree, even all the trees of the field, are withered."

ii. 2—7, 9, 10.

"A day of darkness and of gloominess, a day of clouds and of thick darkness, as the morning spread upon the mountains : a great people and a strong ;...the land is as the garden of Eden before them, and behind them a desolate wilderness ; yea, and nothing shall escape them. The appearance of them is as the appearance of horses ; and as horsemen so shall they run. Like the noise of chariots on the tops of mountains shall they leap ; like the noise of a flame of fire that devoureth the stubble, as a strong people set in battle array. Before their face the people shall be much pained ; all faces shall gather blackness. They shall run like mighty men, they shall climb the wall like men of war ; and they shall march every one on his ways, and they shall not break their ranks....They shall run to and fro in the city ; they shall run upon the wall ; they shall climb up upon the houses ; they shall enter in at

the windows, like a thief....The sun and the moon shall be dark."

NAHUM iii. 17.

"Thy crowned are as the locusts, and thy captains as the *great* grasshoppers, which camp in the hedges in the cold day, but when the sun ariseth they flee away, and their place is not known where they are."

MATTHEW iii. 4.

"His meat was locusts and wild honey."

REVELATION ix. 7, 10.

"And the shapes of the locusts were like unto horses prepared unto battle;...and they had tails like unto scorpions."



THE LOCUST.

"The south-east* wind (writes a traveller) constantly brought with it innumerable flights of locusts, but those which fell on this occasion, we were informed, were not of the predatory sort. They were three inches long from the head to the extremity of the wing, and their body and head of a bright yellow. The locust which destroys vegetation is of a larger kind, and of a deep red. As soon as the wind had subsided, the plain of Bushire was covered by a great number of its poorer inhabitants, men, women, and children, who came out to gather locusts, which they eat. They also dry and salt them,

* Exodus x. 13.

and afterwards sell them in the bazaars as the food of the lowest peasantry. When boiled, the yellow ones turn red, and eat like stale or decayed shrimps. The locusts* and wild honey, which St. John eat in the wilderness, are, perhaps, particularly mentioned to show that he fared like the poorest of men, and not as a wild man, as some might interpret. Indeed, the general appearance of St. John, clothed with camel's hair (or skin), with a leathern girdle about his loins, and living a life of the greatest self-denial, was that of the older Jewish prophets, (Zech. xiii. 4,) and such was the dress of Elijah, the hairy man, with a girdle about his loins, described in 2 Kings i. 8."—MORIER'S *Second Journey through Persia*, &c., p. 44.

"A French traveller who passed Egypt on his way from the upper country and the Red Sea, assures me the Arabs make a sort of bread of the locusts. They dry them, grind them to a powder, then mix this powder with water, and make small round cakes, which serve for bread, when that necessary article is scarce."—MADDEN'S *Travels*.

While at Shiraz, Mr. Morier records that, "On the 11th of June, while seated in our tents about noon, we heard a very unusual noise, that sounded like the rushing of a great wind at a distance. On looking up we perceived an immense cloud, here and there semi-transparent, in other parts quite black, that spread itself all over the sky, and at intervals shadowed the sun. This we soon found to be locusts, whole swarms of them falling about us; but their passage was but momentary, for a fresh wind from the south-west, which had brought them to us, so completely drove them forwards, that not a vestige of them was to be seen two hours after. The locusts which we saw at Bushire were like those which Dr. Shaw saw in Barbary, with legs and body of a bright yellow, and the wings spotted brown. These were larger, and of a red colour, and I should suppose are

* The Locust was a clean meat. (Levit. xi. 22.)

the real predatory locusts, one of the Egyptian plagues ; they are also the *great* grasshopper mentioned by the prophet Nahum, no doubt in contradistinction to the lesser. As soon as they appeared the gardeners and husbandmen made *loud shouts*, to prevent their settling on their grounds. The strength and agility of these animals make me suppose that this was their first flight, and that they could not have come from any great distance. The Persians said they came from the Germesir, (or 'The Hot,' being a hot and desert tract of land in Persia,) which is likely enough, as that was the direction whence the wind blew. They seemed to be impelled by one common instinct, and moved in one body, which had the appearance of being organized by a leader. As all was dry in the plain of Shiraz, the same instinct seemed to propel them forwards to countries of more vegetation, and with a small slant of the wind to the westward they would get into the mountains of Louristan, where the corn was not ripe : and where, as the prophet Joel says, after comparing them to a great army, 'they had the land of Eden before them.' Their strength must be very great, if we consider what immense journeys they have been known to make. They came from Africa to Italy—they have been known in Scotland, and have been seen in the island of Madagascar, the nearest point of which, from Mosambique on the Continent, is one hundred and twenty leagues.

"I have had opportunities," continues Mr. Morier, "from time to time to make observations on the locust, particularly at Smyrna, where, in 1800, they committed great depredations. About the middle of April the hedges and ridges of the fields began to swarm with young locusts, which then wore a black appearance, had no wings, and were quite harmless. About the middle of May they had increased triple the size, were of a grey cindery colour, and had incipient wings about half an inch long. They still continued to be harmless ; but at

the end of June they had grown to their full size, which was three and a half inches in length ; the legs, head, and extremities red ; the body a pale colour, tending to red. They appear to be created for a scourge ; since to strength incredible for so small a creature, they add saw-like teeth, admirably calculated to ‘eat up all the herbs in the land, and devour the fruit of the ground.’ They remained on the face of the country during the months of July and August, sometimes taking their flight in vast clouds, and, impelled by a strong wind, were either lost in the sea, or were driven into other countries. It was during their stay that they showed themselves to be the real plague described in Exodus. They seemed to march in regular battalions, crawling over everything that lay in their passage, in one straight front. They entered the *inmost recesses* of the houses, were found in every corner, stuck to our clothes, and infested our food. The locusts lay their eggs in the autumn, which they do frequently before they take their flight. Sometimes they deposit them in countries where they alight after their flight. The husbandmen and vine-dressers knew whether eggs had been deposited by them, and were most active in discovering them. Sometimes it would happen that none had been deposited at one village, whilst they were found at the next, and they calculated their harvests and vintages accordingly. The operation of the female locust in laying her eggs, is highly interesting. She chooses a piece of light earth, well protected by a bush or hedge, where she makes a hole for herself, so deep that her head just appears above it. She here deposits an oblong substance, exactly the shape of her own body, which contains a considerable number of eggs, arranged in neat order, in rows against each other, which remain buried in the ground most carefully, and artificially protected from the cold of winter. When that is over, several male locusts surround and kill her. The eggs are brought into life by the heat of the sun. If the heats commence early, the lo-

custs early gain strength ; and it is then that their depredations are most feared, because they commence them before the corn has had time to ripen, and they attack the stem when it is still tender.....I conjecture that 'camping in the hedges in the cold day' may be explained by the eggs being deposited during the winter ; and 'when the sun ariseth they flee away,' may also be illustrated by the flying away of the insect as soon as it has felt the sun's influence."—MORIER'S *Second Journey into Persia*, pp. 98—101.

"Nothing could be more accurate than this description of the grasshoppers. I observed this appearance on a journey from Constantinople to Smyrna by land. Early in the morning, the locusts were seen congregating in the bushes by the road-side, in a close mass, which it would be difficult to describe in better words than 'camping in the hedges.' They appeared to be assembled with all the precision of military tactics. But when the sun arose, they fled away, and their place was not known where they were."—REV. J. HARTLEY'S *Researches*, p. 216.

The ravages of the locust on the fields of the Tartars is thus described : "Clouds of locusts frequently alight on their plains ; and giving the preference to their fields of millet, ravage them in an instant. Their approach *darkens the horizon*, and so enormous is their multitude, it *hides the light of the sun*. When the husbandmen are sufficiently numerous, they sometimes divert the storm, by their agitation and their cries ; but when they fail, the locusts alight on their fields, and there form a bed of six or seven inches thick. To the *noise* of their flight succeeds that of their devouring activity ; it resembles the *rattling of hail-stones*, but its consequences are infinitely more destructive. *Fire itself eats not so fast* ; nor is there a vestige of vegetation to be found, when they again take their flight and go elsewhere to produce like disasters."—See HARMER'S *Observations*, vol. iii. p. 305.

In Barbary, in the month of June, the locusts are no sooner hatched than they collect themselves into *compact bodies*, each a furlong or more square ; and *marching* directly after they are come to life, make their way towards the sea, and let *nothing escape* them, eating up everything that is green or juicy ; not only the lesser vegetables, but the vine likewise, the fig-tree, the pomegranate, the palm, and the apple-tree, even *all the trees of the field*.

“ The quantity of these insects is incredible to all who have not themselves witnessed their astonishing numbers ; the whole earth is covered with them for the space of several leagues. The noise they make in browsing on the trees and herbage may be heard at a great distance, and resembles that of an *army* in secret. Wherever their myriads spread, the verdure disappears ; trees and plants, stripped of their leaves and reduced to their naked boughs and stems, cause the dreary image of winter to succeed in an instant to the rich scenery of spring. When these clouds of locusts take their flight, the heavens may literally be said to be *obscured* by them.

“ ‘ In their progress,’ says Dr. Shaw, ‘ they kept their ranks like men of war ; *climbing over every tree or wall* that was in their way. Nay they entered into our very *houses* and bed-chambers, like so many *thieves*. Every effort of the inhabitants to stop them was unavailing ; the trenches they had dug were quickly filled up, and the fires they had kindled extinguished, by infinite swarms succeeding each other.’ ”

The direction the locusts take in their flight varies ; the prophet, who under the similitude of these insects, described the approach of the Chaldean army, speaks of them as coming from the *north*, ch. ii. 20. Of the dreadful effluvia produced by the dead bodies of the locusts, we can form no idea. “ I have often seen,” writes a traveller,* “ the shores of the Pontus Euxinus covered

* The Baron de Tott. See his “ Memoirs.”

with their dried remains, in such multitudes, that one could not walk along the strand without sinking half-leg deep into a bed of these skinny skeletons. Curious to know the true cause of their destruction, I sought the moment of observation, and was a witness of their ruin by a storm, which overtook them so near the shore, that their bodies were cast upon the land, while yet entire. This produced an infection so great, that it was several days before they could be approached.”—HARMER’S *Observations*, vol. iii. pp. 305, 306.

The form of the locusts is in the Book of Revelation compared to that of *horses*, and likewise with the figures of lions and *scorpions*. A remarkable illustration of this comparison is found in Niebuhr’s description of Arabia. “I heard,” he observes, “a particular comparison of the locust with other animals, from an Arab of the desert, in the neighbourhood of Bassorah. As the description of the dreadful locusts in the Revelation did not occur to me, I at first considered it as a conceit of the Bedouin, and paid no attention to it, till another made the same similitude at Bagdad. It is the following ; he compared the head of the locust with the head of a horse ; the breast with that of a lion, the feet with those of a camel, the body with that of a serpent, and the tail with that of a scorpion.

When travelling through the desert, Dr. Robinson relates, “We found upon the shrubs an insect, either a species of black locust or much resembling them, which our Bedouin called ‘Farazel-Jundy,’ soldiers’ horses. They said these insects were common in Mount Sinai, of a green colour ; and were found on date trees, but did them no injury.”—ROBINSON’S *Researches*, vol. i. p. 59.

The reason why the approach of the swarms of the locusts is compared with the morning spread upon the mountains, is pointed out in the following passage of Francis Alvarez, a Portuguese monk, in his travels through Abyssinia.

“The day before the arrival of the locusts, we could presume they were coming, from a yellow reflection in the air, which proceeded from their yellow wings. As soon as this reflection appeared, nobody doubted that an immense swarm of locusts was approaching.” On another occasion the same writer observes, that he saw “this phenomenon so strong, that the ground assumed a yellow tinge from the reflection. The day after there came a swarm of locusts, which, according to what we heard afterwards, covered the country for an extent of four-and-twenty Portuguese miles.”—ROSENMULLER.

“Of the innumerable multitudes of the incomplete insect, or larva, of the locusts, that at this time infested this part of Africa, no adequate idea could possibly be conceived without having witnessed them. For the space of ten miles on each side of the Sea-Cow river, and eighty or ninety miles in length, an area of sixteen or eighteen hundred square miles, the whole surface might literally be said to be covered with them. The water of the river was scarcely visible on account of the dead carcasses that floated on the surface, drowned in the attempt to come at the reeds which grew in the water. They had devoured every green herb, and every blade of grass; and had it not been for the reeds, on which our cattle entirely subsisted while we skirted the banks of the river, the journey must have been discontinued, at least in the line that had been proposed. The larvæ, as generally is the case in this class of insect, are much more voracious than the perfect insect; nothing that is green seems to come amiss to them. They are not, however, without a choice in their food. When they attack a field of corn just struck into the ear, they first mount to the summit, and pick out every grain before they touch the leaves and the stem. In such a state it is lamentable to see the ruins of a fine field of corn. The insect seems constantly to be in motion, and to have some object in view. When on a march during the day, it is utterly impossible to turn the direction of a troop,

which is generally with the wind. The traces of their route over the country are very obvious for many weeks after they have passed it, the surface appearing as if swept by a broom, or as if a harrow had been drawn over it. Towards the setting of the sun the march is discontinued, when the troop divides into companies, which surround the small shrubs, or tufts of grass, or ant-hills, and in such thick patches that they appear like so many swarms of bees ; and in this manner they rest till daylight. It is at such times as they are thus formed that the farmers have any chance of destroying them, which they sometimes effect by driving among them a flock of two or three thousand sheep. By the restlessness of these they are trampled to death.

“ Luckily the visits of this gregarious insect are but periodical, otherwise the whole country must inevitably be deserted, for they rest, as the prophet in Holy Writ hath said, ‘ upon all thorns, and upon all bushes.’ Even at this time the cattle in many parts of Sneeuwberg are starving for want of food. For ten years preceding their present visit they were entirely free from them. Their last exit from the colony was rather singular. All the full-grown insects were driven into the sea by a tempestuous north-west wind, and were afterwards cast upon the beach, where it is said they formed a bank of three or four feet high, that extended a distance of near fifty English miles. Fortunately they were driven thus to sea before they had deposited their eggs in the ground. The larvæ at the same time were emigrating to the northward. The column passed the houses of two of our party, who asserted that it continued without any interruption for more than a month. The locust-birds in myriads were close at their heels, and departed along with them, since which, till the present year, not one of them was to be found in the country.”—BARROW’S *Travels*.

“ We fell in with several swarms of young locusts, the first we had seen during our journey. They were quite

green, with wings just sprouting ; they entirely resembled grasshoppers, and hopped briskly away from our path."—ROBINSON'S *Researches*, vol. ii. p. 625.

LOCUST-BIRD.

"The natural enemy of the locust is the bird *Semermer*, which is of the size of a swallow, and devours vast numbers of them. It is even said that the locusts take fright at the cry of the bird."—BURCKHARDT'S *Syria*, p. 239.

"The environs of Nazareth were covered with locusts. The bird which follows and destroys the locusts had not yet reached Nazareth, but was reported to be at Hattîn. The Arabs say it does not *eat* many of the locusts, but attacks them with beak and talons, killing as many of them as possible."

"...As we rode along, many flocks of the *Semermer*, or locust-bird, flew up around us ; and we could perceive that almost every bird had a locust in its mouth. They are a great blessing to the country."—ROBINSON'S *Researches*, vol. iii. pp. 195, 252.

After travelling for some days without seeing any trees or bushes, Mr. Barrow met with a clump of about half a dozen large bushes, which attracted his notice from "the vast number and size of nests with which they appeared to be loaded. These were judged to be at least sufficiently large for the vultures that were hovering in the air, or for the large blue cranes that sat by the river's side near them. On approaching the bushes a numerous flock of birds, about the size of the common skylark, issued from them. The farmers, though unacquainted with the nests, immediately recognized the bird to be the locust-eater, and rejoiced not a little at its appearance so near the colony. This species of thrush is a migrating bird, and is only met with in places where the migrating locust-frequents. It had not been seen in the colony for the space of thirteen years ;

that is to say, since the last time that the locusts infested the Sneeuwberg. The head, breast, and back are of a pale cinereous colour : the abdomen and rump white ; wings and tail black, the latter short, and a little forked ; from the angle of the mouth a naked area of sulphureous yellow extends under the eye, and a little beyond it ; and two naked black striæ under the throat. The specific name of *gryllivorus* may with propriety be given to it, as its whole food seems to consist of the larvæ of this insect, at least when they are to be obtained. Nature has seldom given a bane but she has accompanied it with an antidote ; or, in other words, she has ordained that one-half of the creation should destroy and devour the other, that the constant operations of reproduction might be going on. The numbers of the *gryllivori* are not less astonishing than those of the locusts. Their nests, that at a distance appeared to be of such great magnitude, were found on examination to consist of a number of cells, each of which was a separate nest, with a tube that led into it through the side. Of such cells each clump contained from six to twenty ; and one roof of interwoven twigs covered the whole, like that made by the magpie. Most of them had young birds, generally five ; the eggs were of a bluish white, with small, faint, reddish specks. These birds had here taken up a temporary abode in a place where they were not likely, in a short space of time, to be under the necessity of quitting for want of food, so immense were the numbers of locusts there congregated.”—BARROW’S *Travels*.

LOCUSTS IN BARBARY.

Dr. Shaw gives the following account of the locusts which he saw in Barbary in 1724 and 1725.

“ They were much bigger than our common grass-hoppers, having brown spotted wings, with legs and bodies of a bright yellow. Their first appearance was towards the latter end of March, the wind having been for some

time southerly ; and in the middle of April their numbers were so vastly increased, that in the heat of the day they formed themselves into large bodies, appeared like a succession of clouds, and darkened the sun. About the middle of May, each of these bodies began gradually to disappear, retiring into plains to deposit their eggs. Accordingly in the month following their young broods began gradually to make their appearance, and it was surprising to observe that no sooner were any of them hatched, than they immediately collected themselves together, each of them forming a compact body of several hundred yards square, which marching afterwards directly forward, climbed over trees, walls, and houses, eat up every plant in their way, and let nothing escape them. The inhabitants, to stop their progress, made trenches all over their fields and gardens, and filled them with water ; or else placing in a row great quantities of heath, stubble, and such like combustible matter, they set them on fire upon the approach of the locusts ; but all this was to no purpose, for the trenches were quickly filled up, and the fires put out by infinite swarms succeeding one another, whilst the front seemed regardless of danger, and the rear passed on so close that a retreat was impossible. A day or two after one of these bodies was in motion, others were already hatched to glean after them ; gnawing off the young branches, and the very bark of such trees as had escaped before with the loss only of their fruit and foliage. So justly has the inspired writer compared them to a great army, and observed that the land is as the garden of Eden before them, and behind them a desolate wilderness.

“ Having in this manner lived nearly a month upon the ruin and destruction of everything green and juicy, they arrived at their full growth, and threw off their worm-like state by casting their skins ; to prepare themselves for the change, they clung by their hinder feet to some bush, twig, or corner of a stone, when immediately by

an undulating motion used upon the occasion, their heads would first appear, and soon after the rest of their bodies.

“The whole transformation was performed in seven or eight minutes, after which they lay for a short time in a languishing condition ; but as soon as the sun and air had hardened their wings, and dried up the moisture that remained upon them after the casting of their sloughs, they returned again to their former voracity, with an addition both of strength and agility. But they continued not long in this state before they were entirely dispersed, as their parents had been before, after the laying of their eggs ; and as the direction of the marches and flights of them both was always to the northward, it is probable they perished in the sea ; a grave which, according to these people, they have only in common with other winged creatures.

“These insects, sprinkled with salt and fried, are in taste not unlike the river cray-fish. The Jews were allowed to eat them, and it was upon these that John the Baptist fed in the wilderness.”

LOCUSTS IN RUSSIA.

“The locusts of Southern Russia are divided into two species ; (one) about an inch and a half, and (the other) about two inches long. Both are equally voracious and equally dreaded, and both are equally produced from eggs deposited in the earth in August and September, by means of a piercing tube with which the female is provided. The animal does not, however, bore merely with its piercer, but thrusts its whole body into the ground, in order that the eggs may be deposited as deeply as possible. This depends, of course, partly upon the nature of the soil, which, when hard, often baffles the exertions of the insect, and compels it to leave its eggs to take their chance just below the surface. It has, however, been observed, that the locust for the most

part looks out for a soft place, where she bores away industriously till completely lost to sight, turning her whole body round all the time. When the hole has been bored as wide and to as great a depth as the animal's strength will allow, she deposits in it from fifty to seventy eggs. This operation generally occupies two or three entire days; at the end of which the mother of a future race of conquerors, exhausted by her labours, lies down and dies. If she has been able to make the hole large enough she remains in it, covering her eggs with her decaying body. These eggs are white and nearly of the same shape and size as those of ants, neatly arranged into a mass or nest by some white glutinous substance, and when taken out of the ground they continue to adhere together. By placing the eggs in a glass, and subjecting them to a gentle degree of heat, they may very soon be hatched, when the baby-locusts will be seen creeping into a premature existence. In the nest underground matters go on more slowly. There the eggs continue throughout the autumn and winter, and it is not till the end of April, or the beginning of May, that the young locusts begin to creep out of their holes. If covered with a thin layer of snow the eggs are seldom killed by the winter frost, even when covered only by an inch of earth; but, if the ground be ploughed up, and the eggs exposed, they are destroyed by the cold. The first warm days of spring call the young locusts forth, and in a very short time they appear in incredible numbers. The millions of mothers that in autumn sank under the load of their eggs, now start up sixty-fold into renewed life. They have no wings when first born, but their legs immediately acquire vigour, so that they are at once provided with the powers of locomotion. They immediately begin to eat, and a rich grassy plain, if they are undisturbed, will perhaps be eaten bare in a few days; if disturbed, they commence their peregrinations forthwith, and the army seems to increase in number as it marches along. They go on rustling and

crackling, and crawling over one another in heaps. They almost always proceed in a straight line, scarcely any object sufficing to impede their course. They climb over the roofs of the low houses, over fences and walls ; march through the streets of towns and villages, not avoiding either man or beast, so that the wheels of a cart will at times sink several inches deep into a mass of locusts, while a pedestrian walking through them will often have them up above his ankle. Enormous quantities of them fall down into the ravines, and are carried away by the streams, which are sometimes so thickly covered with the black carcasses that the water is completely lost to sight. The march of these young locusts is more dreaded even than the flight of the old ones ; not having yet got their wings, they are not to be frightened away either by guns or drums ; and to attempt to destroy them were hopeless, on account of their numbers, a few hundred thousand more or less making but little difference. They are most greedy, too, when young, and, as the grass and corn are just then most tender, the devastation is the more difficult to repair. It is true that while in this state their ravages are confined within narrower limits, on account of the slow rate at which they advance, an army of young locusts being seldom able to march more than two versts in a day. In three or four weeks they attain their full size. In the fifth week their wings are formed, and they begin to fly. From this time they cruise about the country in large swarms till about the middle of September ; when, after an existence of four months, they all perish ; but not before due provision has been made for their multiplication in the ensuing year. The largest swarms appear about the middle of August, when they are supposed to be joined by considerable reinforcements from the south. Their flight is clumsy, and always accompanied by a rustling noise, which, when a flight of them flies along, is as loud as that made by a strong wind blowing through a grove of trees. They cannot fly against the

wind; but they know how to work their way to windward, in true nautical fashion. The height to which they rise depends much upon the state of the weather. On a fine day they will raise themselves nearly two hundred feet above the ground,—that is to say, the cloud will be seen at that height, but the upper strata of these little destructives must of course be much higher. In gloomy weather they fly so near the ground that a man walking through a swarm will often be unable to endure the blows inflicted by them as they fly up against his face, but will be obliged to crouch together, and turn his back to the current till it has passed away. When flying at a great height, if they discover a fresh piece of pasture-ground they sink slowly down till they are about six or seven feet from the surface, when they drop like a shower of stones. As soon as it rains they always drop to the ground. They are rakish in their hours, for they often fly merrily about till near midnight, and seldom leave their roosting-places till eight or nine in the morning. A cloud of locusts is mostly of an oval form, and from two to three *versts** long. Sometimes a cloud will be seen to separate into two or three parties, that afterwards unite again. What the thickness of such a cloud may be it is difficult to say, but it must be considerable, for not a ray of sunshine can pierce the mass, and the shadow cast on the ground is so dense, that on a hot summer's day it diffuses an agreeable coolness around. The sudden darkness occasioned by the appearance of a swarm of locusts on a fine day is quite as great as that which would be caused by a succession of black rainy clouds. In calm weather a cloud of locusts will fly about fourteen English miles in eight hours.

“The ground honoured by the visit of one of these swarms, always assumes the appearance of a field of battle. In their eagerness to feed they often bite one another; and when falling down many break their wings, and are unable to rise again with the rest of the swarm.

* A *verst* is 3500 feet long.

It is difficult to estimate the numbers of one of these winged armies. The people of the country maintain, that when a large cloud of locusts falls it will cover a piece of ground of nearly four versts long, and one verst broad, and in many places the creatures will lie three and four deep, and scarcely an inch will remain uncovered. If there happen to be a tree near the place, it will seem ready to break under the sudden load...a small swarm, covering only one square verst, must consist of not much less than a thousand millions of locusts ! And every one of them, as the Russians say, has the bite of a horse, the greediness of a wolf, and a power and rapidity of digestion unequalled by any other animal on the face of the globe !

“ Though there are some descriptions of food for which the locust shows a partiality, the creature is seldom difficult in its choice, but eats up every green plant that comes in its way. The leaves and young branches vanish from the trees in a trice ; a rich meadow is presently converted into a track of black earth ; the bank of a river is stripped with magical rapidity of its reedy fringe ; and not a particle of stubble is left to mark the place where the green corn was waving but an hour before. As they eat they keep moving on ; but, as the first comers seldom leave much for their successors, the rearguard frequently rise into the air, and let themselves down again somewhat in advance of the main body. Others are continually flying away towards the flanks, and, in proportion as the marauders advance, their solid phalanx assumes more and more the appearance of a lengthened line. The sound of the little animal’s bite as it grazes, joined to the continual rustling of its wings, which it always keeps in motion while feeding, may be distinctly heard at a considerable distance. To any one near the spot the noise is quite as great as that made by a large flock of sheep eagerly cropping the grass. If the corn is quite ripe, the locust can do it little harm ; but whatever is still green is certain to be devoured. Some-

times a farmer, on seeing the enemy's approach, will try to save a field of nearly ripe corn by cutting it down, and carrying the sheaves home immediately; but the attempt rarely succeeds, for the invading host advances its line of march, undismayed by the mowers, and will eat away the blades faster than the scythe can cut them. There are few things the locusts are fonder of than Indian corn, and it is a curious sight to behold a field of maize vanishing before their ravenous teeth. The maize grows to a great height, and makes a very imposing appearance as it approaches maturity. A small number of locusts, however, are able in a few seconds to perforate the plant like a honeycomb, and in a few minutes not a trace of it is left. Each plant is quickly covered with insects, while others are industriously working away at the root. Blade falls rapidly on blade, and at each fall a little swarm rises, to settle quickly down again with renewed voracity. If the corn was nearly ripe the farmer has, perhaps, the consolation of seeing a yellow stubble-field remaining, to tantalize him with the recollection of the hoped-for abundance. In the costly gardens of the Odessa merchants the locust is particularly destructive. It does not touch the melons, cucumbers, nor the growing fruit on the trees. But it ruthlessly devours the leaves and the stalks, leaving the fruit scattered on the ground, to wither with the bodies of the slain destroyers. The leaves, tendrils, and young branches of a vine will be completely eaten away, but the grapes will be found scattered like so many berries below. Every tree in the garden, meanwhile, is bending under the unwelcome load, while the crackling of the branches, the tearing of the bark, and the rustling of the wings, raise a din quite as loud as that of a carpenter's workshop, in which a score or two of men are sawing, boring, and planing; and when at length the swarm takes its departure, it leaves behind it a scene of such perfect desolation as no other animal in the world can equal. Even the dung, of which it leaves an enormous

quantity behind, is injurious to the soil on which it falls, and for a long time after a field has been visited by a swarm of locusts, the cattle manifest the greatest aversion to the place.

"The (peasants) have established for themselves a kind of locust-police. Whoever first sees a swarm approaching is bound to raise an immediate alarm, and to give the earliest possible information to the schulze, who immediately orders out the whole village, and every man, woman, and child comes forth, armed with bells, tin kettles, guns, pistols, drums, whips, and whatever other noisy instruments they can lay their hands on. A frightful din is then raised, which often has the effect of scaring away the swarm, and inducing it to favour some quieter neighbourhood with its presence.

"If the locusts have an aversion to noise, they are still greater enemies to smoking,...the people accordingly, on the first appearance of a fresh swarm, get together as much straw, vine-branches, and dry dung as they can, and with these, fires are lighted about the fields and grounds which it is thought most desirable to protect. This expedient, however, is often a complete failure, for when one of these countless swarms has dropped upon the ground, and proceeds grazing along in the direction of the fire, the mere weight of the general mass forces the foremost ranks into the flames, where a few thousands of them perish, perhaps, but their bodies extinguish the fire, and leave a free field for the advancing enemy. Sometimes they succeed by means of smoke in scaring a swarm, and making it take to the air again, and then great skill is shown in making it fly away from the fields which it is wished to preserve. If the sea be near at hand, it is thought a great point to drive the locusts into the water, into which they fall in such enormous masses that their bodies form at last little floating islands; upon these their more fortunate companions establish themselves, to the height of twenty or thirty inches. If a strong wind blow from the shore, these

pyramids of locusts are, of course, driven out to sea, and nothing more is heard of them ; but if the wind be not strong, they work their way back to the shore, where they soon dry their wings, and prepare themselves for fresh depredations. The millions, meanwhile, that have found a watery grave, give a blackened hue to the foam of the breakers, and lie scattered along the coast in long lines, that look like huge masses of seaweed thrown up by the waves. The cunning of the locusts on these occasions is surprising. A swarm that, with the aid of a strong wind, has been driven out to sea, will often return to shore, not attempting to fly in the wind's teeth, but beating to windward with a succession of tacks, in true seamanlike style. The locusts appear to be perfectly aware that in the village gardens they are certain to find many things that suit their palates amazingly ; and accordingly, they seldom fail to step a little out of their way when they see a village to the right or left of their line of march. The terror of a village attacked by one of these swarms may be more easily imagined than described. Fancy a heavy fall of snow, each flake a little black, voracious insect, and these, as they fall, covering the ground to the depth of two or three inches, while the air still continues obscured by the myriads that remain fluttering about ! The roofs of the houses, and every inch of ground about them are covered by a thick mass of crawling vermin, crackling, hissing, and buzzing ! Every aperture of the house may be carefully closed, yet they come down the chimney by thousands, and beat against the windows like hail ! During the locust years many of these swarms settled upon Odessa, covering the streets and public places, dropping by hundreds into the kettles and saucepans in the kitchen, strutting along in the public walks by millions, and displaying their ugly antics alike in the hovel of the beggar and the fine lady's boudoir."—Kohl's *Russia*, pp. 482—487.

MICE.

1 SAMUEL vi. 5.

“Wherefore ye shall make images.....of your mice, that mar the land; and ye shall give glory unto the God of Israel: peradventure he will lighten his hand from off you, and from off your gods, and from off your land.”

This terrible scourge was not peculiar to Palestine. An historian* mentions, that so vast a multitude of mice sometimes invaded Spain in ancient times, that they produced a destructive pestilence; and in Cantabria, the Romans, by setting a price upon a certain measure of these animals, escaped with difficulty from the same calamity; while in other parts of Italy the number of field-mice was so great, that some of the inhabitants were forced to leave the country. About the beginning of the 12th century, swarms of locusts and mice, during four successive years, so completely ravaged that land, as to cause almost a total failure of the necessaries of life. So great and general was the distress of the people, that a kind of penitential council was held in the year 1120, for the reformation of manners, and to invoke the mercy of the Almighty, who had been provoked by their sins to inflict upon them such terrible judgments.

OSTRICH.

JOB xxxix. 13—18.

“Gavest thou...wings and feathers unto the ostrich? Which leaveth her eggs in the earth, and warmeth them in dust, and forgetteth that the foot may crush them, or that the wild beast may break them. She is hardened

* Strabo.

against her young ones, as though they were not hers, her labour is in vain without fear, because God hath deprived her of wisdom, neither hath he imparted to her understanding. What time she lifteth up herself on high, she scorneth the horse and his rider."

LAM. iv. 3.

"The daughter of my people is become cruel, like the ostriches in the wilderness."



THE OSTRICH.

"When the ostrich is full-grown, the neck, particularly of the male, which before was almost naked, is now very beautifully covered with red feathers. The plumage likewise upon the shoulders, the back, and some

parts of the wings, from being hitherto of a dark greyish colour, becomes now as black as jet ; whilst the rest of the feathers retain an exquisite whiteness. But the belly, the thighs, and the breast do not partake of this covering, being usually naked ; and, when touched, are of the same warmth as the flesh of quadrupeds.

“ Under the joint of the great pinion, and sometimes upon the lesser, there is a strong pointed excrescence, like a cock’s spur, with which it is said to prick and stimulate itself ; and thereby acquire fresh strength and vigour whenever it is pursued. But nature seems rather to have intended, that, in order to prevent the suffocating effects of too great a plethora, a loss of blood should be consequent thereupon, especially as the ostrich appears to be of a hot constitution, with lungs always confined, and consequently liable to be preternaturally inflamed upon these occasions.

“ When these birds are surprised, by coming suddenly upon them whilst they are feeding in some valley, or behind some rocky or sandy eminence in the deserts, they will not stay to be curiously viewed and examined. Neither are the Arabs ever dexterous enough to overtake them, even when they are mounted upon their best horses. They, when they raise themselves up for flight, laugh at the horse and his rider. They afford him an opportunity only of admiring, at a distance, the extraordinary agility and the stateliness likewise of their motions, the richness of their plumage, and the great propriety there was of ascribing to them, as the original signifies, *an expanded quivering wing*. Nothing certainly can be more beautiful and entertaining than such a sight ; the wings, by their repeated, though unwearied vibrations, equally serving them for sails and oars ; whilst their feet, no less assisting in conveying them out of sight, are no less insensible of fatigue.

“ I have been informed, that the ostrich lays from thirty to fifty eggs. The first egg is deposited in the centre ; the rest are placed as conveniently as possible,

round about it. In this manner it is said to lay, deposit, or trust her eggs in the earth, and to warm them in the sand, and forgetteth (as they are not placed like those of some other birds, upon trees, or in the cliffs of rocks, &c.) that the foot of the traveller may crush them, or that the wild beast may break them.

“Yet, notwithstanding the ample provision which is hereby made for a numerous offspring, scarce one quarter of these eggs are ever supposed to be hatched ; and of those that are, no small share of the young ones may perish from hunger, from being left too early by their dams to shift for themselves. For in these, the most barren and desolate recesses of the Sahara, where the ostrich chooses to make her nest, it would not be enough to lay eggs and hatch them, unless some proper food was near at hand, and already prepared for their nourishment. And, accordingly, we are not to consider this large collection of eggs as if they were all intended for a brood ; they are, the greatest part of them, reserved for food which the dam breaks and disposes of, according to the number and the cravings of her young ones.

“But yet, for all this, a very little share of that natural affection, which so strongly exerts itself in most other creatures, is observable in the ostrich. For, upon the least distant noise, or trivial occasion, she forsakes her eggs or her young ones, to which perhaps she never returns ; or, if she does, it may be too late, either to restore life to the one, or to preserve the lives of the other. Agreeably to this account, the Arabs meet sometimes with whole nests of these eggs undisturbed ; some of which are sweet and good ; others are addled and corrupted ; others again have their young ones of different growths, according to the time, it may be presumed, they have been forsaken by the dam. They oftener meet a few of the little ones, no bigger than well-grown pullets, half-starved, straggling and moaning about, like so many distressed orphans, for their mother. And, in this manner, the ostrich may be said to be hardened

against her young ones, as though they were not hers ; her labour (in hatching and attending them so far) being in vain, without fear, or the least concern of what becomes of them afterwards. ‘The daughter of my people,’ says the prophet, ‘is cruel, like the ostriches in the wilderness.’

“Neither is this the only reproach that may be due to the ostrich ; she is likewise inconsiderate and foolish in her private capacity, particularly in the choice of food, which is frequently highly detrimental and pernicious ; for she swallows everything greedily and indiscriminately, whether it be rags, leather, wood, stone, or iron. When I was at Oran, I saw one of these birds swallow, without any seeming uneasiness or inconvenience, several leaden bullets, as they were thrown upon the floor, scorching hot from the mould.

“Those parts of the Sahara, which these birds chiefly frequent, are destitute of all manner of food and herbage, except it be some few tufts of coarse grass, or else a few other solitary plants, each of which is equally destitute of nourishment. Yet these herbs, notwithstanding this dryness and want of moisture in their temperature, will sometimes have both their leaves and their stalks studded all over with a great variety of land-snails, which may afford them some little refreshment. It is very probable likewise, that they may sometimes seize upon lizards and serpents, together with insects and reptiles of various kinds. Yet still, considering the great voracity and size of this camel-bird, it is wonderful, not only how the little ones, after they are weaned from the provisions I have mentioned, should be brought up and nourished, but even how those of fuller growth, and much better qualified to look out for themselves, are able to subsist.

“Their organs of digestion, and the gizzards, which, by their strong friction, will wear away even iron itself, show them indeed to be granivorous ; but yet they have scarce ever an opportunity to exercise them in this way, unless when they chance to stray (which is very seldom)

towards those parts of the country which are sown and cultivated. For these, as they are much frequented by the Arabs, at the several seasons of grazing, ploughing, and gathering in the harvest ; so they are little visited by, as indeed they would be an improper abode for, this shy, timorous bird, a *lover of the deserts*. This last circumstance, in the behaviour of the ostrich, is frequently alluded to in Scripture ; particularly in Isaiah xiii. 21, xxxiv. 13, and xliii. 20 ; Jer. l. 39, where the margin correctly reads, instead of *owl*, *ostrich*.

“ Whilst I was abroad, I had several opportunities of amusing myself with the actions and behaviour of the ostrich. It was very diverting to observe, with what dexterity and equipoise of body it would play and frisk about on all occasions. In the heat of the day particularly, it would strut along the sunny side of the house with great majesty. It would be perpetually fanning and priding itself with its *quivering expanded wings* ; and seem, at every turn, to admire and be in love with its shadow. Even at other times, whether walking about or resting itself upon the ground, the wings would continue these fanning vibrating motions, as if they were designed to mitigate and assuage that extraordinary heat, wherewith their bodies seem to be naturally affected.

“ Notwithstanding these birds appeared tame and tractable to such persons of the family as were more known and familiar to them, yet they were often very rude and fierce to strangers, especially the poorer sort, whom they would not only endeavour to push down by running furiously upon them, but would not cease to peck at them violently with their bills, and to strike at them with their feet, whereby they were frequently very mischievous. For the inward claw, or hoof rather, as we may call it, being exceedingly strong, pointed, and angular, I once saw an unfortunate person, who had his belly ripped open by one of these strokes.

“ Whilst they are engaged in these combats and assaults, they sometimes make a fierce, angry, and hissing

noise, with their throats inflated and their mouths open ; at other times, when less resistance is made, they have a chuckling or cackling voice, as in the poultry kind, and thereby seem to rejoice and laugh, as it were, at the timorousness of their adversary.. But during the lonesome part of the night they often made a doleful and hideous noise, which would sometimes be like the roaring of a lion ; at other times it would bear resemblance to the hoarser voices of other quadrupeds ; particularly of the bull and the ox. I have often heard them groan, as if they were in the greatest agonies ; an action beautifully alluded to by the prophet Micah, (i. 8,) where it is said, ‘ I will make a mourning like the *owls*, or rather *ostrich*.’ ”—See SHAW’S *Travels in Barbary*, vol. ii. pp. 341—349.

HUNTING OSTRICHES.

There is a curious method of hunting ostriches in Africa, mentioned in the very interesting work of Mr. Moffat, called ‘ Missionary Labours, and Scenes in Southern Africa.’ “The method is ingenious, though extremely simple. A kind of flat double cushion is stuffed with straw, and formed something like a saddle. All, except the under part of this, is covered over with feathers, attached to small pegs, and made so as to resemble the bird. The neck and head of an ostrich are stuffed, and a small rod introduced. The Bushman intending to attack game, whitens his legs with any substance he can procure. He places the feathered saddle on his shoulders, takes the bottom part of the neck in his right hand, and his bow and poisoned arrows in his left. Such as the writer has seen were the most perfect mimics of the ostrich, and at a few hundred yards distant it is not possible for the human eye to detect the fraud. This *human* bird appears to pick away at the verdure, turning the head as if keeping a sharp look out, shakes his feathers, now walks, and then trots, till he gets within



bow-shot, and when the flock runs away from receiving an arrow, he runs too. The male ostriches will on some occasions give chase to the strange bird, when he tries to elude them, in a way to prevent their catching his scent; for when once they do, the spell is broken. Should one happen to get too near in pursuit, he has only to run to windward, or throw off his saddle, to avoid a stroke from a wing, which would lay him prostrate.”—P. 64.

“The natives have several ways of killing the ostrich. On finding the eggs they will dig a hole near the place, and covering themselves with earth, watch the return of the bird, when an arrow shot through the brain as she sits, kills her, without injuring the plumage. They will also chase them for hours when young, and taking them alive, they become as tame as the domestic fowl.”—*Discoveries in Africa*.

“On many parts of the great deserts ostriches were seen scouring the plain, and waving their black and white plumes to the wind, a signal to the Hottentots that

their nests were not far distant, especially if they wheeled round the place from whence they started up ; when they have no nest they make off, immediately on being disturbed, with the wing-feathers close to the body. There is something in the economy of this animal different in general from that of the rest of the feathered race. It seems to be the link of union, in the great chain of nature, that connects the winged with the four-footed tribe. Its strong-jointed legs and cloven-hoof, are well adapted for speed and for defence. The wings and all its feathers are insufficient to raise it from the ground ; its camel-shaped neck is covered with hair ; its voice is a kind of hollow mournful lowing, and it grazes on the plain with the qua-cha and the zebra.

“ The male, distinguished by its glossy black feathers from the dusky grey female, is generally seen with two or three, and frequently as many as five, of the latter. These females lay their eggs in one nest, to the number of ten or twelve each, which they watch all together, the male taking his turn of sitting on them among the rest. Between sixty and seventy eggs have been found in one nest ; and a few are most commonly lying round the sides of the hole, having been thrown out by the birds on finding the nest to contain more than they could conveniently cover.

“ The eggs of the ostrich are considered a great delicacy. They are prepared in a variety of ways ; but that made use of by the Hottentots is perhaps the best : it is simply to bury them in hot ashes, and through a small hole made in the upper end to stir the contents continually round till they acquire the consistence of an omelet ; prepared in this manner we very often, in the course of our long journeys over the wilds of Africa, found them an excellent repast. In these eggs are frequently discovered a number of small oval-shaped pebbles, about the size of a marrowfat pea, of a pale yellow colour, and exceedingly hard. In one egg were nine and in another twelve of such stones.”—BARROW'S *Africa*.

HUNTING PARTRIDGES.

1 SAMUEL xxvi. 20.

“Now therefore, let not my blood fall to the earth before the face of the Lord : for the king of Israel is come out to seek a flea, as when one doth hunt a partridge in the mountains.”

“The Arabs have the following method of catching partridges. Observing that they become languid and fatigued after they have been hastily put up twice or thrice, they immediately run in upon them, and knock them down with their bludgeons. It was precisely in this manner Saul hunted David ; coming hastily upon him, and putting him up from time to time, in hopes he should at length, by frequent repetitions of it, be able to destroy him.”—HARMER’S *Observations*, vol. ii. pp. 75, 76.

“Approaching a camp in the desert, we beheld a very animated and busy scene ; the girls were singing and the children busied in running down the young partridges with dogs, as they were as yet only able to fly a short distance at a time.”—IRBY AND MANGLES, p. 260.

QUAIL.

EXODUS xvi. 13.

“And it came to pass that at even the quails came up and covered the camp.”

It is a matter of doubt whether the bird here specified was the one which we call quail, or the Katta, a bird nearly allied to it, and very common in Palestine.



THE KATTA.

The *Katta* is one of the most common birds in and on the borders of Palestine. The stony districts of the country beyond Jordan swarm with them. They are so numerous in this quarter, that they actually appear like clouds in the distance. Burckhardt notices them often. Near Bozra he says,...“ The quantity of kattas here are beyond description; *the whole plain seemed sometimes to rise*; and far off in the air they were seen like large moving clouds.” In the country east of the Dead Sea, and in the mountains of Edom, their numbers are the most excessive and incredible; and so dense are the flocks in which they fly, that the Arab boys often kill two or three at a time, merely by throwing a stick among them. According to Russel, the bird is found at all seasons, but thus numerous chiefly in May and June, when, even in Northern Syria, a quan-

tity sufficient to load an ass has sometimes been taken at one shutting of the clasp-net.

The Turks, among whom the more delicate kinds of wild fowl are not in much request, are remarkably fond of this bird ; but by the Franks in Syria the flesh is considered black, hard, and dry, and the bird never appears at their tables. The katta deposits upon the ground two or three eggs of a greenish-black colour, and about the size of a pigeon's. The Arabs collect large quantities of them, and eat them fried in butter. Burckhardt suggests the probability that this bird is the *Selav*, with which the Israelites were fed to satiety in the wilderness : Hasselquist was of the same opinion.

ROE (GAZELLE).

1 CHRON. xii. 8.

“As swift as the roes upon the mountains.”—2 SAM. ii. 18.

CANT. ii. 8, 9.

“The voice of my beloved ! behold, he cometh leaping upon the mountains, skipping upon the hills.”

“My beloved is like a roe, or a young hart.”

ISAI. xiii. 13, 14.

“I will shake the heavens, and the earth shall remove out of her place...it shall be as the chased roe.”

HERD OF GAZELLES.

“We perceived no tent any where, nor even one of those small black goats which are so often in the valleys, bounding over the rose-coloured rocks of granite. But the eye of a hunter is not to be deceived. Hussein,



pressing his hand on my head, made me lie down on the ground. I acquiesced immediately, not knowing by what danger we were threatened. He had discovered at the bottom of the ravine a whole herd of gazelles; he was breathless while he gave me this information: and then hastening to take off his clothes, his cloak, shirt, and cap all being flung on the earth, his pouch on his naked breast, and his gun on his shoulder, he went towards them, pointing me out a spot whence I might discern the game without delay, and set up a loud shout if the gazelles should endeavour to escape on my side. Behold me, then, crouching on the earth, reduced to play the part of a mere gamekeeper to an ignorant Bedouin. In truth, it became necessary for us to obtain in this way our dinner for the day; we had no chance of any other.

“The gazelles were passing at the bottom of the

ravine near a stream, gathered round the leader of the herd, who, with lifted head and nose in air, seemed rather to attend to the duties of a sentinel than to think of finding food. Strong in form, the head being surmounted by long horns, turned back and notched by several rings, these inhabitants of the mountains impart to the whole of this wild country a kind of animation which well associates with its character. My eyes followed the long and cunning detours of Hussein on the other side, who descended to the bottom of the ravine, taking advantage of every rock to conceal himself. His body shining in the distance, as he bent it to avoid detection, looked like a serpent coiled up ; and the whole picture was highly improved by this exertion of human skill to overreach the sagacity of wild beasts.

“At the first discharge, the whole herd was put to flight : they bounded over rocks and cleared precipices ; the Arab was instantly after them, following in the same paths, daring the same dangers. A second discharge took place, and the echoes reached me with the hunter’s shout of exultation : he had hit his victim.

“Taking Hussein’s apparel on my shoulders, I went down the bottom of the ravine, following the direction of his voice, which summoned me to assist him in extricating the game from the steep side of a rock, whence it threatened to fall into a deep gulf. My Arab had taken his aim with wonderful accuracy, the two balls having entered the body of the animal within three inches of each other. We took possession of our game, which I carefully wrapped up in my cloak. Half an hour sufficed to cut up the gazelle, and put up the limbs in its own skin. The liver and the heart roasted on some lighted brambles, served for our supper ; and a projecting rock, near a spring, afforded us protection for the night.

“After having spent two days with Hussein in this surprising mountain, I rejoined my guides, bringing back, together with my notes and drawings, the young

of the female which Hussein had killed. I intended to rear it ; but before I could find a goat to feed it, it died."—LABORDE, pp. 256—258.

"We saw the gazelles bounding before us, over shrubs and rocks and every obstacle, and felt the exquisite fullness of meaning in the Church's exclamation, 'Behold, he cometh leaping upon the mountains, skipping upon the hills! My beloved is like a gazelle or a young hart.'

"It is the very nature of this lively animal to bound over the roughest heights with the greatest ease ; it seems even to delight in doing so."—*Mission to the Jews*, p. 296.

"Gazelles are seen in considerable numbers all over the Syrian desert. On the eastern frontiers of Syria are several places allotted for the hunting of gazelles ; an open space in the plain, of about one mile and a half square, is enclosed on three sides by a wall of loose stones, too high for the gazelles to leap over. In different parts of this wall gaps are purposely left, and near each gap a deep ditch is made on the outside. The enclosed space is situated near some rivulet or spring, to which in summer the gazelles resort. When the hunting is to begin, many peasants assemble and watch till they see a herd of gazelles advancing from a distance towards the enclosure, into which they drive them ; the gazelles, frightened, by the shouts of these people, and the discharge of fire-arms, endeavour to leap over the wall ; but they can only effect this at the gaps, where they fall into the ditch outside, and are easily taken, sometimes by hundreds. The chief of the herd always leaps first, the others follow him one by one. The gazelles thus taken are immediately killed, and their flesh sold to the Arabs. Of the gazelle's skin a kind of parchment is made, used in covering the small drum with which the Syrians accompany some musical instrument or the voice."—BURCKHARDT'S *Notes, &c.* pp. 220, 221.

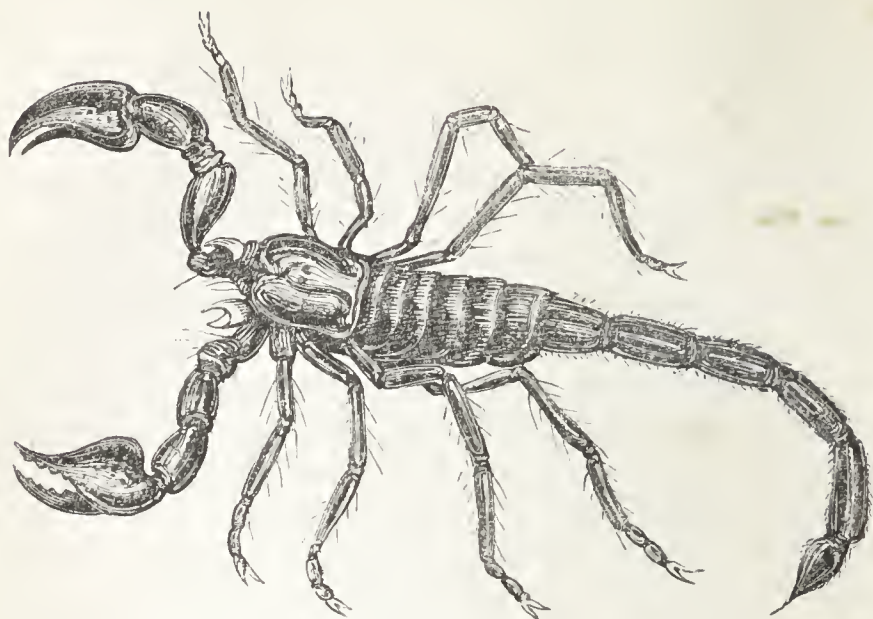
Captains Irby and Mangles mention meeting two white gazelles. "They were very timid, the belly and tail perfectly white."—*Travels*, p. 31.

"We saw twenty-three white gazelles."—P. 275.

"We suddenly came in sight of a large herd of antelopes, which appeared to be of the species called by us gazelle. The Arabs seized their lances, we drew our pistols, and distributing ourselves in an immense circle, we walked our horses towards them slowly. They heeded us not till we approached near, when they began to hold up their beautiful heads, adorned with slightly curved tapering horns, and trotted up together; then, seeing us spurring our horses from behind the little hillocks all around them, they dashed through us with the rapidity of wind; lances were thrown, pistols discharged, but all in vain; they quickly distanced the fleetest horse, which was a grey Arab mare, and then stopped, and turned round, and looked at us, and then took to their heels again, bounding over the ground in such a way that they appeared to fly rather than to run."—ADDISON'S *Damascus and Palmyra*, ii. p. 340.

"In the consul's house, we saw a tame gazelle, gentle and timid, with bright black eyes. Mr. Nicolayson's two little girls had another. So that they are still known to the daughters of Jerusalem as in Solomon's days."—*Mission to the Jews*, p. 139.

"The horns of the gazelle and antelope serve as a substitute for nails or pegs. These are fixed in different parts of the walls, and on them hang the quivers, bows, spears, and shields of the chief."—*Discoveries in Africa*.



SCORPION.

DEUTERONOMY viii. 15.

“Who led thee through that great and terrible wilderness, wherein were fiery serpents and scorpions.”

EZEKIEL ii. 6.

“Be not afraid of them, neither be afraid of their words, though...thou dost dwell among scorpions.”

LUKE x. 19.

“Behold, I give unto you power to tread on serpents and scorpions,...and nothing shall by any means hurt you.”

REVELATION ix. 5, 10.

“Their torment was as the torment of a scorpion, when he striketh a man....And they had tails like unto scorpions, and there were stings in their tails.”

“A little black boy, belonging to the governor, who was running about, set up the most inhuman cries: he was stung by a scorpion which he had trod upon. He must have suffered excessive pain; for, although of a race which bears every thing with remarkable patience, he rolled on the ground grinding his teeth, and foaming at the mouth. We knew of no remedy by which we could afford him relief. The people put a bandage on the wound, which produced little effect. After three long quarters of an hour of suffering, he complained less, but could make no use of his foot, which was very much inflamed. Our friends, who had been used to accidents of this kind, looked upon it as an ordinary affair, but advised us at the same time to be on our guard, as the serpents abounded in these walls.”—LABORDE'S *Mount Sinai and Petra*, p. 122.

“The night passed over quietly, and the cold of the morning had warned us to rise, when we found beneath the carpet which formed our bed a large scorpion, of a yellow colour, and three inches in length. When he was detected, he endeavoured to effect his escape, though not with a rapidity sufficient to ensure his safety; but our Arabs did not wish that he should be killed. I had already observed, on other occasions, a singular feeling of benevolence among these people; but I did not imagine that it extended to such obnoxious animals. We were told that scorpions and serpents abound in this part of the desert.

“When the Israelites were defeated by the Amalekites and the Canaanians, and refused admission into the country of the Edomites, they descended into Wady Araba, the way from the Red Sea, in order to turn into Idumea. Already wearied by the continued privations which they experienced during an expedition that appeared so inviting, from the fertility of the countries they passed through, on arriving in this valley, their sufferings were still further augmented by the multitudes of serpents which assailed them on all sides. The fact

thus recorded in the Scriptures is fully confirmed by the report of the Arabs, as well as by the vast numbers of those reptiles which we found two leagues to the east of this place, on our return to Akaba.

“These reptiles are expressly mentioned in Deuteronomy :—‘ Who led thee through the great and terrible wilderness, wherein were fiery serpents, and scorpions, and drought, where there was no water : who brought thee forth water out of rock of flint ? ’

“In the book of Numbers mention is made of Mount Akrabbim, that is to say, of the mount of scorpions, situated to the south of the Dead Sea : ‘ And your border shall turn from the south to the ascent of Akrabbim, and pass on to Zin.’ The same name occurs in Joshua, and in the book of Judges. The mountain took its name from the quantity of serpents found in its neighbourhood. The ‘ fiery serpents ’ are so called in a metaphorical sense, from the burning effect of their bites.”—LABORDE’S *Mount Sinai*, &c. pp. 145—147.

“We killed by the road-side a black scorpion, at least four inches long.”

“Their jokes were sometimes rather rough : on one occasion an Arab put a living scorpion inside my jacket.”—IRBY AND MANGLES, pp. 444, 483.

“When I opened my canteen, I found in it a little black scorpion, about an inch and a half long, the first we had seen.”—*Jewish Intelligence*.

“We observed platforms, of palm leaves, raised about five feet from the ground, for the purpose of sleeping, and defending the persons from scorpions, which are very common.”—DENHAM’S *Africa*.

“The scorpions, made their appearance in the course of the night in great numbers, and several men were stung by them. On hearing the disturbance, and learning the cause, I called my negro, and, striking a light, we killed three in my tent ; one of them was full six inches in length, of the black kind, exactly resembling those I had seen in Tripoli.”—MAJOR DENHAM.



SERPENT—SNAKE.

GEN. iii. 1, 14, 15.

“Now the serpent was more subtile than any beast of the field which the Lord God had made.....And the Lord God said unto the serpent,...thou *art* cursed above all cattle, and above every beast of the field : upon thy belly shalt thou go, and dust shalt thou eat all the days of thy life : And I will put enmity between thee and the woman, and between thy seed and her seed ; it shall bruise thy head, and thou shalt bruise his heel.”

PSALM lviii. 4, 5.

“They are like the deaf adder that stoppeth her ear, which will not hearken to the voice of charmers, charming never so wisely.”

PROVERBS xxiii. 32.

“At the last it biteth like a serpent, and stingeth like an adder.” (Cockatrice.)

AMOS v. 19.

“As if a man did flee from a lion, and a bear met him; or went into the house, and leaned his hand on the wall, and a serpent bit him.”

MATTHEW vii. 10.

“Or if he ask a fish will he give him a serpent?”

x. 16.

“Be ye therefore wise as serpents.”

JOHN iii. 14, 15.

“And as Moses lifted up the serpent in the wilderness, even so must the Son of man be lifted up: That whosoever believeth in him should not perish, but have eternal life.”

REVELATION xii. 9.

“And the great dragon was cast out, that old serpent, called the Devil; and Satan, which deceiveth the whole world: he was cast out into the earth, and his angels were cast out with him.”

The cobra de capella, or hooded snake, is a large and beautiful serpent, but one of the most venomous. It has the power of contracting or enlarging its hood, the centre of which is marked in black and white, like a pair of spectacles, on which account it is called the spectacle snake. Of this kind are the dancing snakes, which are carried in baskets through Hindoostan, and procure a maintenance for a set of people who play a few simple notes on the flute, with which the snakes seem much delighted, and keep time by a graceful motion of the head, erecting about half their

length from the ground, and following the music with gentle curves. "Among my drawings," writes an Eastern traveller, "is that of a cobra de capella, which danced for an hour on the table, while I painted it; during which time I frequently handled it, to observe the beauty of the spots, and especially the spectacles on the hood, not doubting but that its venomous fangs had been previously extracted. But the next morning, my upper servant came to me in great haste, and desired that I would instantly retire, and praise God for my good fortune. Not understanding his meaning, I told him that I had already performed my devotions. He then informed me, that, while purchasing some fruit, he observed the man who had been with me on the preceding evening, entertaining the country people with his dancing snakes: they, according to their usual custom, sat on the ground around him; when, either from the music stopping too suddenly, or from some other cause irritating the vicious reptile, which I had so often handled, it darted at the throat of a young woman, and inflicted a wound, of which she died in about half an hour."

"We killed a couple of snakes, one five, the other near six feet long; their colour was entirely a golden yellow; they were very fierce, and made several attempts to spring at the horses. The peasantry considered them as very venomous, and gave them the name of *cobra capella*."—*Travels in Africa*.

The following narrative was communicated to the writer by a gentleman of high station in the Honourable Company's Civil Service at Madras.

"One morning as I sat at breakfast, I heard a loud noise and shouting among my palankeen-bearers. On inquiry, I learned that they had seen a large hooded snake, and were trying to kill it. I immediately went out, and saw the snake climbing up a very high green mound, whence it escaped into a hold in an old wall of an ancient fortification; the men were armed with their

sticks, which they always carry in their hands, and had attempted in vain to kill the reptile, which had eluded their pursuit, and in his hole he had coiled himself up secure, whilst we could see his bright eyes shining. I had often desired to ascertain the truth of the report, at to the effect of music upon snakes : I therefore inquired for a snake-catcher. I was told there was no person of the kind in the village ; but after a little inquiry, I heard there was one in a village distant three miles. I accordingly sent for him, keeping a strict watch over the snake, which never attempted to escape whilst we, his enemies, were in sight. About an hour elapsed when my messenger returned, bringing a snake-catcher. This man wore no covering on his head, nor any on his person, excepting a small piece of cloth round his loins : he had in his hands two baskets, one containing tame snakes, one empty ; these and his musical pipe were the only things he had with him. I made the snake-catcher leave his two baskets on the ground at some distance, while he ascended the mound with his pipe alone. He began to play : at the sound of music the snake came gradually and slowly out of his hole. When he was entirely within reach, the snake-catcher seized him dexterously by the tail, and held him thus at arm's length ; whilst the snake, enraged, darted his head in all directions, but in vain : thus suspended, he has not the power to round himself so as to seize hold of his tormentor. He exhausted himself in vain exertions ; when the snake-catcher descended the bank, dropped him into the empty basket, and closed the lid : he then began to play, and after a short time, raised the lid of the basket, the snake darted about wildly, and attempted to escape ; the lid was shut down again quickly, the music always playing. This was repeated two or three times ; and in a very short interval, the lid being raised, the snake sat on his tail, opened his hood, and danced quite as quietly as the tame snakes in the other basket ; nor did he again attempt an escape.

This, having witnessed with my own eyes, I can assert as a fact.”—*Penny Magazine* for April, 1833.

“Early this morning two jugglers came to my door. Two snakes were let out of a bag, when one of the jugglers began to beat a little drum. The snakes immediately reared themselves on their tail, and made a kind of sham dance. The juggler afterwards played various tricks with them, sometimes wreathing them round his neck, coiling them in his bosom, or throwing them among the people. On pointing his finger at their mouth, they immediately raised themselves up in an attitude to spring forward; but after having exasperated them to the utmost, he had only to spit in their face to make them retreat quite crest-fallen. I measured one of them: it was six feet three inches long; the head large, flat, and blunted, and along the neck, a kind of gills fully two inches in breadth, and five inches in length, which they elevated when angry. The back and belly were of a dull white, and the sides of a dark lead colour. Between the gills there were fine red stripes across the throat, decreasing in size from the mouth downwards. The venomous fangs had been extracted, but still, to guard against all possible injury, the fellow who played tricks with them had a large roll of cloth wound round the right arm. Their bite is said to be mortal, and to prove fatal to a horse or a cow in half an hour.”—*Discoveries in Africa*, vol. ii. pp. 292, 293.

Eastern Story.

“Ammededdulat, who reigned in Persia in the tenth century, and was a most generous prince, found himself reduced to great difficulties, when fortune, which had raised him from a very low state, (for he was nothing more than the son of a fisherman,) undertook to maintain him.....For walking one day in one of the rooms of his palace, which had been before that time the residence of Jacout, his enemy, he perceived a serpent, which

put its head out of a chink in the wall. Upon which he immediately ordered that the place should be searched, and the serpent killed. In opening the wall there, they found a secret place, in which they could not discover the serpent, but a treasure, which was lodged in several coffers.".....

"We killed this day an enormous snake...it was a most disgusting, horrible animal, but not however venomous. It measured eighteen feet from the mouth to the tail; it was shot by five balls, and was still moving off, when two Arabs, each with a sword, nearly severed the head from the body. On opening the belly, several pounds of fat were found, and carefully taken off by the two guides—this they pronounced a sovereign remedy for sick and diseased cattle."

"The Abyssian hornbill feeds on insects, fish, snakes, and serpents, the latter of which they have a particular instinct of discovering. This bird discovers their vicinity while yet many feet under ground, digs on the spot, destroys the nest, and feeds on the venomous inhabitant and its eggs."—DENHAM'S *Africa*.

By the *adder in the path*, is probably meant the cerastes, or horned snake. Addison, on his road to Palmyra, "killed *on the path* a horned snake, *the most venomous reptile of Syria*."

"I observed a serpent coiled in the yellow sand, which it resembled in colour; and, dismounting from my camel, I killed it with my whip. It proved to be a species of cerastes, and was about seventeen inches in length. Its two horns, which rose immediately above its eyes, were half an inch in height; and slightly curved towards its back. The Arabs declared it to be dangerous; and they were unwilling to touch it. The cerastes is very common in Egypt and the desert."—*Lands of the Bible*.

"We have several kinds of snakes, the largest which I have seen was about nine feet long. Our servant, Chedi, a Hindoo, ran after it with a bamboo. A Hindoo woman seeing him, cried out, 'Do not kill our god! Do not kill

our god!’ The man replied; ‘I shall merely give it one stroke;’ gave it a blow on the head and killed it.

“The larger snakes are less dangerous than the small ones. The latter are now and then found in our houses. One morning, Mrs. Leupolt had been sitting in her room with her three children playing around her on the floor: the youngest was about nine months old. She was an active child, creeping about and generally examining every thing which she saw within her reach. After Mrs. Leupolt and the little ones had left the room, the sweeper went in to clean it. He had scarcely commenced, when he called out, ‘A snake! a snake!’ Some boys belonging to our Orphan Institution, who were near, killed it. It was a *cobra capella*, and one of the most poisonous. The children had played within a foot of the spot where it lay concealed under a piece of cloth, which Mrs. Leupolt had deposited there on the previous day. Had our dear girl seen the reptile, she would undoubtedly have seized it, and would have been a corpse in about twenty minutes. But our Heavenly Father guarded her: to Him be the praise!

“The bite of a serpent is frequently fatal to the natives. During the night these creatures come out of their holes, and creep under the pillows of the people while they sleep. Should they happen to hurt the snake, by turning at night, it will bite them, and the poor people never awake again. I have known instances of this kind, and I have been several times called up at night, because a snake had found its way among the schoolboys. If the remedy be applied in time, the danger is not very great; for by giving one hundred drops of laudanum in a glass of brandy, and in about fifteen minutes two hundred drops, and again, in a short time after, from three to four hundred drops more, the laudanum counteracts the poison, and the person recovers. Care must, however, be taken to wash the wound with cold water, and, if it be in an arm or leg, to bandage the limb above the wound. This quantity of laudanum

would in other cases be sufficient to kill, not only a man, but a horse ; yet, in cases of snake-bites it scarcely affects the sufferer. After the person has been kept walking for about four hours he will feel sleepy, and the next day rise in his usual health.”—*Recollections of an Indian Missionary*, pp. 3, 4, 5.

“The wild and uncultivated ground in this island, (Cyprus) becomes a most fruitful nursery for vipers and serpents. Some of the latter are black and upwards of four feet in length ; and a wound inflicted by one is certain death. In consequence of the danger to be apprehended, the male inhabitants who have occasion to go about the fields wear high strong boots, to prevent attacks from these and other venomous reptiles which so much infest this most neglected country.”—*RAE WILSON*, vol. ii. pp. 191, 192.

“Snakes of different sorts were seen and killed daily ; all of them, according to the Hottentot’s information, more or less venomous. These people are not unacquainted with several interesting particulars as to the nature and habits of the animal, as well as the vegetable part of the creation. From one I learned a very extraordinary effect produced by the application of the oil of tobacco to the mouth of a snake. One of these reptiles, about two feet in length, and of a bluish colour, had coiled itself five or six times round the body of a lizard. As I was endeavouring to set at liberty the captive animal, one of the Hottentots took out with the point of a stick from the short stem of his wooden tobacco pipe, a small quantity of a thick black matter which he called tobacco oil. This he applied to the mouth of the snake while darting out its tongue, as these creatures usually do when enraged. The effect of the application was instantaneous almost as that of an electric shock. With a convulsed motion, that was momentary, the snake half untwisted itself, and never stirred more ; and the muscles were so contracted that the whole animal felt dried and rigid as if dried in the sun. The Hottentots con-

sider the oil of tobacco among the most active of poisonous substances.”—BARROW’S *Africa*.

After being pursued by savages, Major Denham writes, “My strength had almost left me, and I seized the young branches issuing from the stump of a large tree which overhung the ravine, for the purpose of letting myself down into the water, as the sides were precipitous, when, under my hand, as the branch yielded to the weight of my body, a large liffa, the worst kind of serpent this country produces, rose from its coil, as if in the very act of striking. I was horror-struck, and deprived for a moment of all recollection—the branch slipped from my hand, and I tumbled headlong into the water beneath ; this shock, however, revived me, and with three strokes of my arms I reached the opposite bank, which, with difficulty, I crawled up ; and then, for the first time, felt myself safe from my pursuers.”—DENHAM’S *Africa*.

STORK.

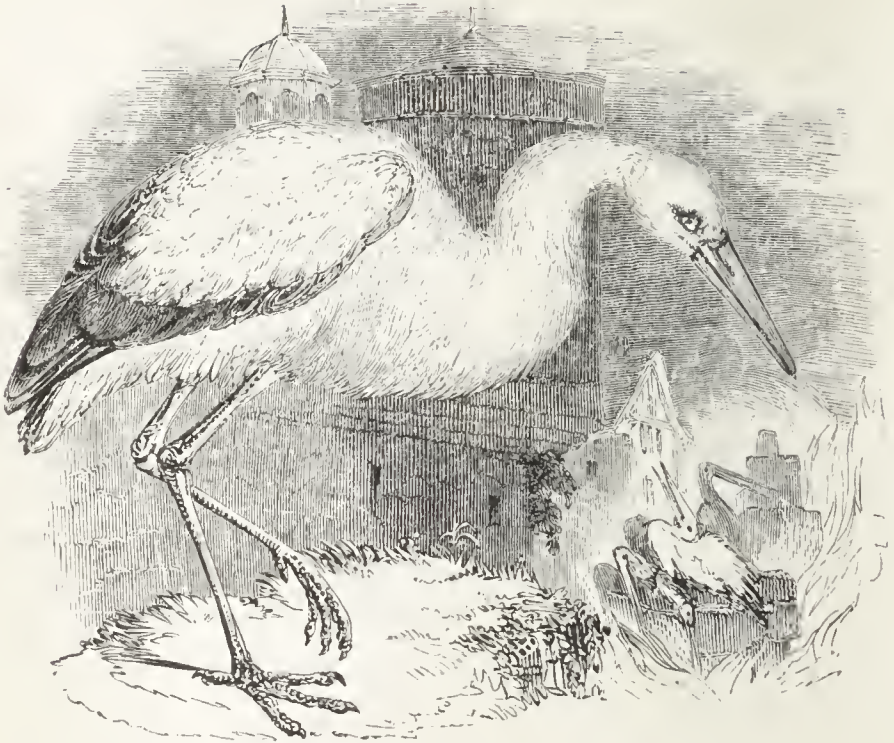
PSALM civ. 17.

“As for the stork, the fir-trees are her house.”

JEREMIAH viii. 7.

“Yea, the stork in the heavens knoweth her appointed times...but my people know not the judgment of the Lord.”

Dr. Shaw saw the stork returning in such numbers near to, or over the Holy Land, as could not but attract his notice when he was on the coast of that country. “I saw,” he writes, “in the middle of April, 1722, (our ship then lying at anchor under Mount Carmel,) three flights of storks, some of which were more open and scattered, with larger intervals between them ; others



THE STORK.

were closer and more compact, as in the flights of crows and other birds, each of which took up more than three hours in passing by us, extending itself, at the same time, more than half a mile in breadth. They were then leaving Egypt, (where the canals and ponds that are annually left by the Nile, were become dry,) and directed themselves towards the north-east." The expression, stork in *the heaven*, points out the *manner* in which this bird flies in its passage, whereas many birds come and go in a more private and concealed manner.

"Prodigious flights of storks were flying about, having very large outstretched wings. Their beaks and legs were of considerable length, and they flew together in a circular figure. Although ranked among unclean birds, they are supposed to be unrivalled among the feathered tribes for an affectionate and amiable disposition ; they are exceedingly tame, and may be considered

as domestic birds, and are further described as an emblem of filial affection.

‘Because when age has seized, and made his dam
Unfit for flight, the grateful young one takes
His mother on his back, provides her food,
Repaying thus her tender care of him
Ere he was fit to fly.’

“In Egypt the stork was held as the emblem of a dutiful child. The Hebrew name signifies pious or benign. Storks feed on vermin, and are useful in destroying locusts. They build their nests upon the tops of houses in the country, and are under no kind of fear, or apprehension of being dislodged. No such act, indeed, is contemplated by the inmates of any dwelling to which they resort. Their nests are formed of dry twigs of trees, and are so large as to appear like small faggots. The noise of these birds is a sort of chatter; and when they join in chorus the sound is similar to that of a watchman’s rattle. If their flight is high, and they are silent, and in regular order, it is a sign of approaching fine weather; if, on the contrary, they proceed in disorder, or return with cries, it announces wind. They perch not only on the roofs of houses, but on the tops of the highest trees; and shun the noise and bustle of towns; are familiar like sparrows, and their annual migration is similar to that of swallows, which has not escaped the observation of the prophet. They pay a visit about March, and arrive during the night, and in October they depart again, when they assemble together, and set out in a body. When in Denmark, I found that they appeared there in May, and emigrated in August. This bird is an object of great veneration in Egypt. I also observed that it is protected in Holland..... At Fez there is an hospital, to which funds have been bequeathed for the nursing of sick cranes and storks, and for burying them when dead. By the Jews, on the contrary, the stork is held in abhorrence.”—RAE WILSON’S *Travels*, vol. ii. pp. 209—11.



WOLF.

GENESIS xlix. 27.

“Benjamin shall ravin as a wolf ; in the morning he shall devour the prey, and at night he shall divide the spoil.”

ISAIAH xi. 6.

“The wolf also shall dwell with the lamb.”

HABAKKUK i. 8.

“More fierce than the evening wolves.”

MATTHEW vii. 15.

“Beware of false prophets, which come to you in sheep’s clothing, but inwardly they are ravening wolves.”

ACTS xx. 29.

“After my departure shall grievous wolves enter in among you, not sparing the flock.”

SPANISH WOLVES.

“...Descending into a hollow, with a rising ground on the opposite side, a very large wolf crossed the road about a hundred yards before us, and after keeping his line for a short way, turned and re-crossed it, having shaped his course at an angle, so that he rather increased his distance in doing so. I did not at first perceive the use of this back movement; but, on looking to the right, down the hollow, it was explained by the sight of his companion, who had been following...so that this countermarch was for the sake of rejoining company.~ I observed that the leader, although looking towards us, and keeping an eye to our motions, was sniffing in the direction of the hill before us, and on reaching the summit I found it occupied by a large flock of goats, which were quietly browsing, having little notion of the neighbours so near at hand. There was no one with them, nor any dogs, but on looking forward I saw at a distance two other flocks, the shepherds belonging to which had left them, and were all congregated, holding a social chat, midway between their respective herds. I called to the man belonging to the nearest flock, and communicated the intelligence of the vicinity of the wolves, much to his surprise, having no idea that in the middle of the day, and at such a season (the middle of summer), they would have the audacity to show themselves in this open manner. When we disturbed them the leader of the two was within one hundred and fifty yards of the flock, and the formation of the ground was exactly suited to favour their movements, so that, only for our accidental arrival, two at least of the unfortunate goats would have inevitably served them for break-

fast, as their guardian was far beyond the power of assisting in their defence. These animals were very large ...and being of very compact form, with great strength, if they had courage, a man, unless well armed, would have little chance of resisting two of them. Beyond doubt they were male and female; the colour was a light grey, and their pace a gentle, but quick light canter, not the long trot generally used by them when in full career."

A gentleman "was travelling in the summer time... when he made his mid-day halt in a forest. After tying up a valuable horse he was riding to a tree, he was standing at no great distance with his gun in his hand, when he saw a large wolf approach the animal, which, probably taking him for a dog, paid no attention to his movements. After going round the horse once or twice, drawing nearer each time, he suddenly stopped when under his head, and scratching the earth so as to raise the dust, in an instant flew at the throat, severing the windpipe by a single bite of his powerful jaw...The gentleman fired at the wolf, but in the hurry and surprise missed, and he got clear off, leaving the horse, of course, mortally wounded."—*Spain and the Spaniards*, vol. i. p. 395; vol. ii. pp. 71, 72.

"The country* being well cultivated, tigers, bears, leopards, hyænas, and such animals, are no longer to be found; and we thereby see the words of the Lord fulfilled,—'And the fear of you and the dread of you shall be upon every beast of the earth.' But there are still wolves, which, however, seldom venture to attack a grown-up man. Although they are generally not very large, yet they are strong enough to carry away sheep. They sometimes attack children, though such instances are very rare: children, however, are in danger. One night, when our native Christians were sleeping in the open air, as the natives usually do in the hot season, one of them, named John, was asleep in the courtyard before

* Part of India.

his house. His wife was sleeping at a short distance from him, with an infant by her side. About midnight, John was awoke by a noise. On looking round to ascertain the cause, he saw a huge wolf standing by the side of his sleeping infant, looking at her, and probably ready to devour her. John instantly jumped up, and made a great noise, which alarmed the wolf, and caused him to decamp.”—*Recollections of an Indian Missionary*, pp. 2, 3.

UNICORN.

NUMBERS xxiii. 22.

“He hath as it were the strength of an unicorn.”

DEUTERONOMY xxxiii. 17.

“His horns are like the horns of unicorns: with them he shall push the people together to the ends of the earth.”

JOB xxxix. 9, 10.

“Will the unicorn be willing to serve thee, or abide by thy crib? Canst thou bind the unicorn with his band in the furrow? or will he harrow the valleys after thee?”

PSALM xxii. 21.

“Save me from the lion’s mouth: for thou hast heard me from the horns of the unicorns.”

xxix. 6.

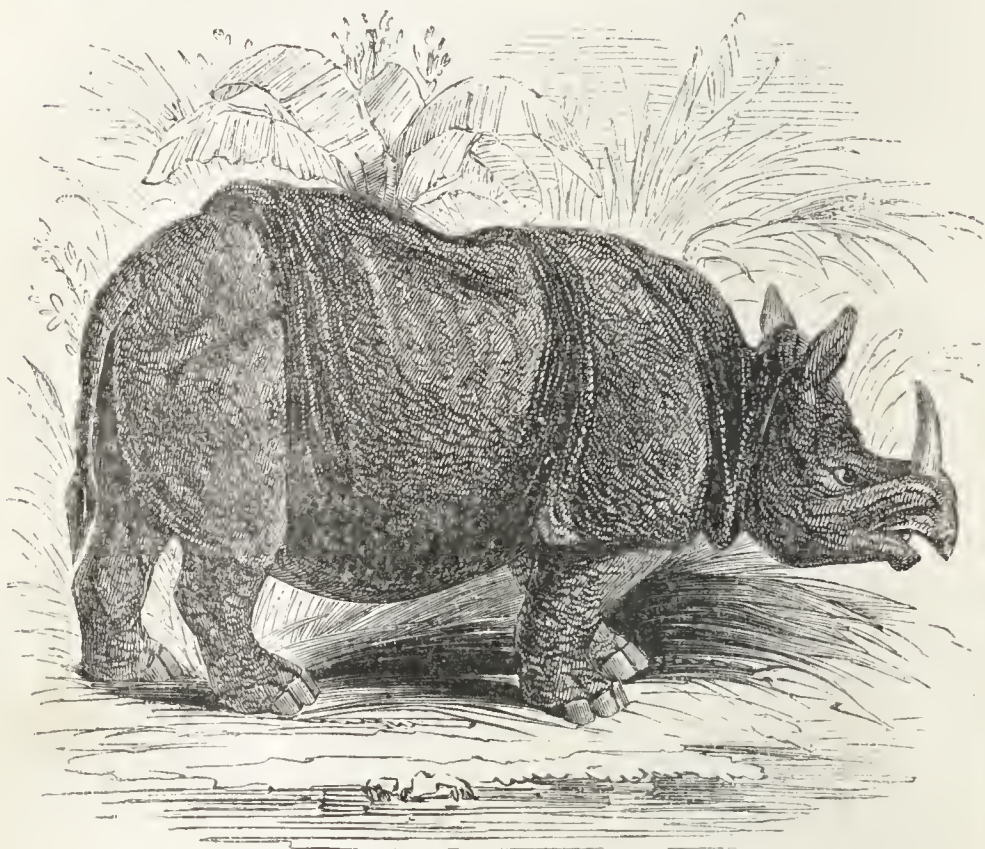
“He maketh them also to skip like a calf; Lebanon and Sirion like a young unicorn.”

xcii. 10.

“But my horn shalt thou exalt-like the horn of an unicorn.”

ISAIAH xxxiv. 7.

“And the unicorns shall come down with them, and the bullocks with the bulls; and their land shall be soaked with blood, and their dust made fat with fatness.”



THE RHINOCEROS.

There are two animals which each claim to be the *unicorn* of Scripture, viz.; the buffalo, and the rhinoceros. Of both of these a short account will be given, but the general opinion is in favour of the latter.

Of the buffalo of the Holy Land and its vicinity, Dr. Wilson observes:—“The buffalo differs here from the buffalo in India, only in being of a smaller breed, with more shaggy hair, and, I think, with somewhat less lateral horns. It is a very uncomely and uncouth animal; but it is well suited for marshy grounds. It

stands exposure to heavy rains better than the cow. The first specimens which we saw to-day were engaged in ploughing a field. The buffalo at present in the Holy Land is commonly supposed to have been introduced into the west of Asia and Egypt from India. The wild buffalo of Abyssinia is *another species*. Of it, Dr. Roth says, ‘The wild buffalo—fierce, and as yet untamed—inhabits the forests and jungles all along the river Háwash; its chase is considered one of the most dangerous pursuits of the hunter, several human lives being frequently expended in the conquest of one beast.’”—WILSON’S *Lands of the Bible*.

“The Ghawârineh* have large herds of horned cattle, among which are many buffaloes; all these were now returning from pasture across the plain, to pass the night near the tents of their owners; and presented a greater appearance of ease, not to say of wealth, than we had yet seen among the Arabs.

“These buffaloes are, of course, a different species from the vast herds bearing that name which roam over the western wilds of North America. They are very common in Egypt, being kept both for milk and for labour, and are found also in Italy....In Egypt, as likewise here, they are mingled with the neat cattle, and are applied, in general, to the same uses. But they are a shy, ill-looking, ill-tempered animal. They, doubtless, existed anciently in Palestine, though probably in a wild state, or unsubdued to labour, as at the present day in Abyssinia. The remark was made to me in Egypt, that the Abyssinians, when they come to that country, are astonished at the comparative tameness of the buffalo, and stand in much greater fear of them than the Egyptians do.” Dr. Robinson supposes that the buffalo is the Scripture unicorn, for he adds: “The actual existence of this animal in Palestine leaves little doubt that it is the *Reem*† of the Hebrew Scriptures;

* Arab tribes inhabiting the neighbourhood of the sea of Tiberias.

† *Reem* is the Hebrew name of the animal which is called in our Version, Unicorn.

for which both ancient and modern versions have substituted the apparently fabulous unicorn.

"The Reem is several times coupled with, or compared to, the ox.—See especially Job i."—ROBINSON'S *Researches*, vol. iii. pp. 305, 306.

"Large herds of cattle," writes Mr. Jolliffe, "pasture on the banks of the Nile. Those of the buffalo kind appear to be almost amphibious; during the heat of the day, such as are not employed in husbandry recline in the water with their figure immersed, except the head; and I have seen long strings of them guided only by a peasant boy, traverse the current where it is broadest and most rapid, with the ease of an aquatic fowl. These are probably the kine which Pharaoh beheld exhibited to him in a dream as they 'came up out of the river.' In fact, there is a very strong resemblance between the common cow and the buffalo, as well in respect to their form, as their natural habits. The structure of anatomy is in each extremely similar; both are equally subservient to the wants of the husbandman, and are equally the object of his care; being often bowed to the same yoke, fed at the same crib, and reared under the same roof. The buffalo is certainly not so handsome as the English cow; his figure is far more gross, his limbs clumsier, and his body much more short and thick. In his movements, too, there is something of an air of savage wildness, and he carries his head more inclining to the ground. I do not find that the flesh is often used as food, being often very otherwise than gratifying, either in point of taste or smell; the milk is produced in great quantity, but esteemed much inferior to the cow. This species of cattle is chiefly valuable for agricultural purposes, on account of their strength."—JOLLIFFE'S *Letters from Palestine*, &c. vol. ii. pp. 13—15.

AFRICAN BUFFALO.

“The horns of the buffalo are each twelve or thirteen inches broad at the base, and are separated only by a narrow channel, which fills up with age and gives to the animal a forehead completely covered with a rugged mass of horn, as hard as rock....The points are generally distant from each other about three feet. About the height of a common sized ox, the African buffalo is at least twice its bulk. The fibres of its muscles are like so many bundles of cords, and they are covered with a hide little inferior in strength and thickness to that of



THE BUFFALO.

the rhinoceros. It is preferred by the peasantry to the skin of all other animals for cutting into thongs to be used as traces and harness for their carts and waggons. The flesh is too cross-grained to be good; yet the

farmers generally salt it up as food for their Hottentots. It is curious enough that the teeth of this species of buffalo should at all times be so perfectly loose in the sockets, as to rattle and shake in its head. The lion frequently measures his strength with the buffalo, and always gains the advantage. This, however, he is said to accomplish by stratagem, being afraid to attack him in the open plain. He lies waiting in ambush till a convenient opportunity offers for springing upon the buffalo, and fixing his fangs in his throat ; then striking his paw into the animal's face, he twists round the head and pins him to the ground by the horns, holding him in that situation till he expires from loss of blood."—BARROW'S *Southern Africa*.

RHINOCEROS.

The rhinoceros, in size, is only exceeded by the elephant : and in strength and power is inferior to no other creature. He is at least twelve feet in length, from the extremity of the snout to the insertion of the tail ; and six or seven feet in height. He is particularly distinguished from all other animals, by the remarkable weapon he carries upon his nose. This is a very hard horn, solid throughout, directed forward, and has been seen four feet in length. There is also a two-horned rhinoceros, one horn being placed above the other. The rhinoceros is quite untractable, but is not ferocious ; he is most destructive in fields, for he feeds upon vegetables, branches of trees, prickly shrubs, &c. ; but he does not attack animals. He sometimes reaches the age of eighty years.

Describing a species of rhinoceros met with in Africa, Major Denham writes, (It is) "a two-horned animal, with one long horn and a second shorter just above it, nearly between the eyes, (and) was described to me as having carried a man and horse, spiked on his horn, more than one hundred yards, when, frightened by the cries of the people, he dropped them, and made his

escape ; the man was unhurt, but the horse died. This animal is extremely ferocious, and by no means common, and was described to us as being equal to a good-sized bullock in height ; part of the head which I saw resembled very much that of a large hog....

“The derivation of the word unicorn, both in the Hebrew and Ethiopic, seems to be from erectness, or standing straight. This is certainly no particular quality in the animal itself, who is not more, nor even so much, erect as many other quadrupeds, for its knees are rather crooked ; but it is from the circumstance and manner in which his horns are placed. The horns of all other animals are inclined to some degree of parallelism with the nose, or *os frontis*. The horn of the rhinoceros alone is erect and perpendicular to this bone, on which it stands at right angles, thereby possessing a greater purchase or power, as a lever, than any horn could possibly have in any other position. This situation of the horn is very happily alluded to in the sacred writings : *My horn shalt thou exalt like the horn of the reem* ; Psalm xcii. 10. And the horn here alluded to is not wholly figurative, but was really an ornament worn by great men in the days of victory, preferment, or rejoicing, when they were anointed with new, sweet, or fresh oil ; a circumstance which David joins with that of erecting the horn.”

SINGULAR DISCOVERY OF AN UNKNOWN ANIMAL, PERHAPS
THE UNICORN, IN AFRICA.

Barrow mentions in his Travels having seen many drawings of animals executed by African savages, which, though rude, were very correct representations. They were drawn with charcoal, pipe-clay, &c., on the smooth sides of caverns. He met in one cavern with the figure of an animal which the peasants declared existed in parts of the country. It seems to have been mentioned

by other travellers, and is described as resembling a horse, beautiful and swift. Barrow suggests that it may be the *unicorn*, but this must be a very uncertain matter. The following is his account :—

“ We still continued our search in the hope of meeting with the figure of the unicorn, the peasantry being equally sanguine to convince me of the truth of their assertions, as I was to gratify curiosity. We came at length to a deep cave covered in front by thick shrubbery. One of the party mounted up the steep ascent, and having made his way through the close brushwood, he gave us notice that the sides of the cavern were covered with drawings. After clearing away the bushes to let in the light, and examining the numerous drawings, some of which were tolerably well executed, and other caricatures, part of a figure was discovered that was certainly intended as the representation of a beast with a single horn projecting from the forehead. The body and legs had been erased to give place to the figure of an elephant that stood directly before it. Imperfect as the figure was, it was sufficient to convince me that the Bosjesmans are in the practice of including among their representations of animals, that of an unicorn ; and it also offered a strong argument for the existence of a living original. Among the several thousand figures of animals that, in the course of the journey, we had met with, none had the appearance of being monstrous, none that could be considered as works of the imagination, “ creatures of the brain ;” on the contrary, they were generally as faithful representations of nature as the talents of the artist would allow. The unicorn, as it is represented in Europe, is unquestionably a work of fancy ; but it does not follow from hence that a quadruped with one horn, growing out of the middle of the forehead, should not exist. The arguments, indeed, that might be offered are much stronger for its existence than the objections are against it. The first idea of such an animal seems to have been taken from Holy

Writ. The animal alluded to in the Book of Job has been supposed, with great plausibility, to be the horned rhinoceros. Moses also very probably meant the rhinoceros when he mentions the unicorn as having the strength of God."

WILD BEASTS.

PSALM civ. 20.

"Thou makest darkness, and it is night, wherein the beasts of the forest do creep forth."

"During the excessive heats of the summer, and especially when we were apprehensive of being intercepted by the freebooting Arabs, we travelled in the night, in which—*having no eyes*, according to their proverb, in which few of them dare venture out, not knowing the unseen and unexpected dangers and ambuscades with which they might possibly fall into. At this time, we had frequent opportunities of calling to remembrance the beautiful words of the Psalmist, 'Thou makest darkness that it may be night, wherein all the beasts of the forest do move.' The lions roaring after their prey, the leopards, the hyænas, the jackals, and a variety of other ravenous creatures crying out to their fellows,* brought in very awfully upon the solitude, and the safety, I might say, wise, that we might otherwise promise to ourselves for this season."—SHAW'S *Barbary*.

"Nothing could be more wild than the country we had passed through this day....it was one continued wood, with narrow winding paths, to avoid the overhanging branches of the prickly tulloh. The frequent footmarks of lions, the jackal, and hyæna, gave us a pretty good idea of the nature of the inhabitants; and their roarings at night, convinced us that they were

* Isaiah xlii. 22 ; xxxiv. 14.

no great distance... We came to the place (where a large company) had passed the preceding night. They had lighted their fires in the very centre of the path, and made a good fence all round them of large branches of trees and dry wood. This fence is sometimes set fire to, when their four-footed visitors are numerous, and approach too near. Camels and animals of every description are placed in the centre ; and should one stray in the night, he is seldom again recovered. (Travellers) never travel after dusk, particularly those on foot ; and our negroes had such a fright during the latter part of this day's march, that they declared, on coming up with the camels, that their lives were in danger from such late marches, an immense lion having crossed the road before them only a few miles from where we halted. There can be little doubt that by their singing and number they had disturbed the lion from his lair, as we must have passed within ten paces of the foot of the tree from which he broke forth on their approach : they said that he had stopped and looked back at them ; and if they had not had presence of mind to pass on without at all noticing him, or appearing alarmed, some one of the party would have suffered."—*Discoveries in Africa*.

"The woods of Jericho abound with game, wild boar, gazelle, red partridge, and the francolin, which is a rare species of the same. I may also mention that during the course of this winter, a lynx and a wolf have been killed in the neighbourhood, and a hyæna was shot last autumn not far from the city."—*Jewish Intelligence*.

FONDNESS OF ANIMALS IN EGYPT FOR THE WATER.

GENESIS xli. 2, 3.

"And behold, there came up out of the river seven well-favoured kine, and fat-fleshed ; and they fed in a meadow. And behold, seven other kine came up after

them out of the river, ill-favoured, and lean-fleshed, and stood by the other kine upon the brink of the river.”

“In passing up the canal (from Alexandria to the Nile), and the same was true after we entered the river, I could not but notice how the people and animals loved to be in the water. The children and youth were seen in it, and the cattle seemed to have a passion, not only for wading in the water, but for lying down in it, so as often to cover their whole bodies, except a small part of their heads. This may, in part, have been to keep off the flies, but mainly, I judge, to enjoy the coolness which the water imparted to them. I never before understood the force of the expression in Pharaoh’s dream, when it is said, he ‘saw seven kine come up out of the river.’ It is true to the life. They lie in the water until satisfied, then come up and feed on the low grounds or meadows near it.”—PAXTON’S *Letters*, p. 245.





CHAPTER II.

FLOCKS AND HERDS :

MANNER OF TENDING THEM, ETC.

GENESIS iv. 2, 4.

“ Abel was a keeper of sheep,...and Abel...brought of the firstlings of his flock, and of the fat thereof. And the Lord had respect unto Abel, and to his offering.”

xiii. 1—end.

“ And Abram went up out of Egypt, he, and his wife, and all that he had, and Lot with him, into the south. And Abraham was very rich in cattle,.....and Lot also.....had flocks, and herds, and tents. And the land was not able to bear them, that they might dwell

together : for their substance was great..... And there was a strife between the herdmen of Abram's cattle, and the herdmen of Lot's cattle..... And Lot lifted up his eyes, and beheld all the plain of Jordan, that it was well watered everywhere..... Then Lot chose him all the plain of Jordan,.....and pitched his tent toward Sodom.Then Abram removed his tent, and came and dwelt in the plain of Mamre."

GENESIS xxiv. 11, 15—20.

"And he made his camels to kneel down without the city, by a well of water, at the time of the evening, even the time that women go out to draw water....And behold, Rebekah came out...with her pitcher upon her shoulder...and she went down to the well, and filled her pitcher, and came up. And the servant ran to meet her, and said, Let me, I pray thee, drink a little water of thy pitcher. And she said, Drink, my Lord : and she hasted, and let down her pitcher upon her hand, and gave him drink. And when she had done giving him drink, she said, I will draw water for thy camels also, until they have done drinking. And she hasted, and emptied her pitcher into the trough, and ran again unto the well to draw water, and drew for all his camels."

xxvi. 19, 20.

"And Isaac's servants digged in the valley, and found there a well of springing water. And the herdmen of Gerar did strive with Isaac's herdmen, saying, The water is ours."

xxix. 2, 3, 7—10.

"And (Jacob) looked, and behold, a well in the field, and lo, there were three flocks of sheep lying by it ; for out of that well they watered the flocks : and a great stone was upon the well's mouth. And thither were all the flocks gathered ; and they rolled the stone from the well's mouth, and watered the sheep, and put the stone

again upon the well's mouth in its place...and he said, Lo, it is yet high day, neither is it time that the cattle should be gathered together : water ye the sheep, and go and feed them. And they said, We cannot, until all the flocks be gathered together, and till they roll the stone from the well's mouth ; then we water the sheep. And while he yet spake with them Rachael came with her father's sheep, for she kept them. And...when Jacob saw Rachael...(he) went near, and rolled the stone from the well's mouth, and watered the flock."

GENESIS xxxii. 5, 7.

"I have oxen, and asses, flocks, and men servants, and women servants...And he (Jacob) divided the people that was with him, and the flocks and herds, and the camels, into two bands."

xxxvii. 12—17.

"And (Joseph's) brethren went to feed their father's flock in Shechem. And Israel said unto Joseph, Do not thy brethren feed the flock in Shechem? Come, and I will send thee unto them. And he said to him, Here am I. And he said to him, Go, I pray thee, see whether it be well with thy brethren, and well with the flocks ; and bring me word again. So he sent him out of the vale of Hebron, and he came to Shechem. And a certain man found him, and behold, he was wandering in the field : and the man asked him, saying, What seekest thou? And he said, I seek my brethren : tell me, I pray thee, where they feed *their flocks*. And the man said, They are departed hence ; for I heard them say, Let us go to Dothan. And Joseph went after his brethren, and found them in Dothan."

EXODUS xii. 5—7.

"Your lamb shall be without blemish, a male of the first year ; ye shall take it out from the sheep, or from the goats : And ye shall keep it up until the fourteenth day of the same month : and the whole assembly of the

congregation of Israel shall kill it in the evening. And they shall take of the blood, and strike it on the two side-posts and on the upper door-post of the houses, wherein they shall eat it."

JOB i. 3.

"His substance also was seven thousand sheep, and three thousand camels, and five hundred yoke of oxen, and five hundred she-asses, and a very great household."

PSALM xxiii. 1.

"The Lord is my shepherd, I shall not want."

[Read the whole psalm.]

xxxvii. 20.

"The enemies of the Lord shall be as the fat of lambs : they shall consume ; into smoke shall they consume away." (As the fat was wholly consumed by the fire on the altar, so the wicked shall consume away in the fire of God's anger.)

lxiii. 5.

"My soul shall be satisfied as with marrow and fatness."

lxxvii. 20.

"Thou leddest thy people like a flock by the hand of Moses and Aaron."

lxxviii. 52, 53.

"But made his own people to go forth like sheep, and guided them in the wilderness like a flock. And he led them on safely, so that they feared not ; but the sea overwhelmed their enemies."

SONG OF SOLOMON i. 7.

"Tell me, O thou whom my soul loveth, where thou feedest, where thou makest thy flock to rest at noon : for why should I be as one that turneth aside by the flocks of thy companions?"

ISAIAH xl. 11.

“He shall feed his flock like a shepherd, he shall gather the lambs with his arm, and carry them in his bosom, and shall gently lead those that are with young.”

JEREMIAH xxxiii. 13.

“In the cities of the mountains...shall the flocks pass again under the hands of him that telleth them.”

EZEKIEL xxxiv. 14, 29.

“I will feed them in a good pasture, and upon the high mountains of Israel shall their fold be : there shall they lie in a good fold, and in a fat pasture shall they feed upon the mountains of Israel...And I will raise up for them a plant of renown.” [Read the whole chapter.]

AMOS iii. 12.

“As the shepherd taketh out of the mouth of the lion ...*a piece of an ear*...”

MICAHA vii. 14.

“Feed (marg. *rule*) thy people with thy rod, the flock of thine heritage.”

MATTHEW xxv. 32.

“And before him shall be gathered all nations ; and he shall separate them one from another, as a shepherd divideth his sheep from the goats.”

JOHN x. 2—5.

“He that entereth in by the door is the shepherd of the sheep. To him the porter openeth, and the sheep hear his voice : and he calleth his own sheep by name, and leadeth them out. And when he putteth forth his own sheep he goeth before them, and the sheep follow him : for they know his voice. And a stranger will they not follow, but will flee from him : for they know not the voice of strangers.” [Read the whole chapter.]

1 COR. ix. 7.

“Who feedeth the flock, and eateth not of the milk of the flock?”

1 PETER i. 18, 19.

“For as much as ye know that ye were not redeemed with corruptible things, as silver and gold, from your vain conversation received by tradition from your fathers; But with the precious blood of Christ, as of a lamb without blemish and without spot.”

v. 2, 4.

“Feed the flock of God which is among you...and when the Chief Shepherd shall appear, ye shall receive a crown of glory that fadeth not away.”

“The Bedouins are essentially a pastoral people—their only riches are their flocks and herds, their home is in the wide desert, and they have no local attachments; they seldom remain above one month in one spot, but wander about the deserts from well to well. When their flocks have eaten up what little verdure there is in one place, they strike their tents, and set out for another.”

—MADDEN'S *Travels*.

“To-day they pitch their tents among the mountains, to-morrow in the plain; and wherever they plant themselves for the time, all that they have on earth—wife, children, and friends, are immediately around them. In fact, the life of a Bedouin, his appearance and habits, are precisely the same as those of the patriarchs of old. Abraham himself, the first of the patriarchs, was a Bedouin; and four thousand years have not made the slightest alteration in the character and habits of this extraordinary people. Read of the patriarchs in the Bible, and it is the best description you can have of pastoral life in the East at the present day.”—*Incidents of Travel*.

“Among the barren and desolate mountains, there is frequently a small space of ground, near some fountain

or deposit of water, known only to the Arabs, capable of producing a scanty crop of grass to pasture a few camels, and a small flock of sheep or goats. There the Bedouin pitches his tent, and remains until the scanty product is consumed ; and then packs up his household goods, and seeks another pasture ground.”—*Incidents of Travel*.

“ The Grecian poets, Homer and Hesiod, do not speak of gold and silver money ; they express the value of things by saying they are worth so many oxen or sheep. They estimated the riches of a man by the number of his flocks, and that of a country by the abundance of its pastures and the quantity of its metals. These observations throw great light upon the patriarchal history. The patriarchs occupied the rank of chiefs, or princes ; their substance consisted in their flocks and herds ; and in the occupations and duties of the families of the Turcoman and Bedouin chiefs of modern times, we have an exact transcript of their domestic manners.

“ A sheikh, who has the command of five hundred horse, does not disdain to saddle and bridle his own, nor to give him barley and chopped straw.”

“ We beheld the plain before us covered with an immense multitude of Arabs, with their flocks and camels. They had come from plains far distant—from the extensive tracts which extend towards Babylon and Bagdad, the pastures being scanty, or else partially exhausted this season. They had journeyed hither with all their flocks and herds, for the sake of the superior pasturage the Syrian plains afford. Their tents were spread over an immense space of ground before us, those of the Sheikh being distinguished by their superior size. Groups of camels were standing in some parts, and groups of their masters beside them, and herds of cattle, and goats, and horses were dispersed over all the plain, mingled with parties of Arabs, who watched and attended them.

“ We came in sight of an Arab camp pitched near a

rivulet of water, in the midst of the plain, and flocks of cattle were feeding on the rich pasture. The large tent of the sheikh was conspicuous in the midst, and we resolved to trust to their hospitality. Having passed the line of tents, we stopped at the door of the chief's, and alighting from our horses, entered. The Arabs gave us a kind and friendly reception. We sat down on the floor, and in about half an hour a repast was brought of boiled rice, cakes of bread, and fresh butter. The encampments and journeyings of these people probably present a vivid picture of those of the patriarchs, who, with their flocks and herdsmen, and camels, went on their journeys until they pitched their tents in a place that had water, and was rich in pasture."—See Appendix to CARNE'S *Letters*, and the *Letters*, p. 369.

"When at the northern end of the Gulf of 'Akabah, Dr. Robinson writes, "we met a large caravan of the Haweitât (an Arab tribe) coming from the Eastern desert, whence they had been driven out by the drought. They were now wandering towards the south of Palestine, and had with them about seventy camels and many asses."—*Researches*, vol. i. p. 239.

"He told us that his master, the chief sheikh (of Dura) was the owner of five male, and six female slaves, two hundred sheep, three hundred goats, twenty-one neat cattle, three horses, and five camels."—*Ibid.* p. 3.

"In July, 1846, there were upwards of twenty thousand camels, and more than fifty thousand goats, grazing there;* as the fine pastures of the surrounding plain attract immense numbers of the 'Anezah Arabs thither during the summer months."—WILSON'S *Lands of the Bible*.

"We calculated that altogether we could not have passed fewer than thirty-five thousand animals. We could not look upon them, without having recalled to our remembrance the passage of Isaiah, 'The multitude

* Dr. Wilson was travelling through some fine pasture land.

of camels shall cover thee, the dromedaries of Midian and Ephah; all they from Sheba shall come; they shall bring gold and incense; and they shall show forth the praises of the Lord.”—WILSON’S *Lands of the Bible*.

“The state and equipage of the Arab sheikhs is maintained by means of a revenue derived from a tithe which they exact for all the cattle, the camels excepted. This tenth of the innumerable herds and flocks, yields the chiefs a very handsome income.”*—IRBY AND MANGLES, p. 485.

“It was a pleasing sight to see (the Arabs) bring in their flocks at night, which always slept close to the tents of their owners, several Arabs together, with numerous dogs, remaining outside as guards. The lambs were placed inside the tents, in a small fenced place, to screen them from the inclemency of the night air, which was nearly as cold as you would experience it in England at that season, always freezing hard. The first care in the morning was to let their young charge out to their mothers, when it was not an uninteresting scene to observe the numerous ewes recognizing their offspring by the smell alone; the lambs, not being gifted with the sagacity of their mothers, were all willing to suck from the first ewe they met with.”—IRBY AND MANGLES, pp. 278, 279.

“We came to a fine flowing well. The water was cold and pleasant. Some Syrian shepherds had gathered their flocks around the well. There were many hundreds of goats; some drinking out of the troughs, some reclining till the noon-day heat should be past. We were again reminded of the song, ‘Where thou makest the flock to rest at noon;’ and of the care which the Lord Jesus takes to refresh the weary souls of his people during the burden and heat of the day, delivering them from daily returning wants and temptations.”—*Mission to the Jews*, p. 208.

* Levit. xxvii. 32.



“In the evening I went to water my horse at the spring ;—I met there a number of shepherds with their flocks ; the rule is, that the first who arrives at the well, waters his cattle before the others ; several were, therefore, obliged to wait till after sunset. There are always some stone basins round the wells, out of which the camels drink, the water being drawn up by leathern buckets, and poured into them : disputes frequently happen on these occasions. The well has a broad staircase leading down to it.”—BURCKHARDT’S *Syria*, &c. p. 63.

“A fine region, which comprehends good pasturage and plenty of water, is held in great estimation by the Persian shepherds; and they carry their flocks to the highest parts of the mountains, where these blessings may be found in abundance. This, perhaps, will give fresh force to the promises made by the prophet Isaiah.”

—MORIER.

While visiting the Nestorian Christians, Dr. Grant travelled over a very mountainous district. “The first range was passed without dismounting from our mules; but the second was very steep and lofty, and occasioned me a long and toilsome walk. Upon the summit we passed some of the summer pasture-grounds of the Nestorians, where those who attend the flocks live in a pure, invigorating atmosphere, and drink from the crystal streams perpetually cooled by the melting snows, of which large banks, the remains of avalanches, still occupied the deep ravines; while the surrounding heights were glistening in their fresh winter apparel. The inhabitants of each village have their separate pastures, and live in harmony with each other, seeming to regard their sojourn upon the mountain-heights as the pleasantest portion of their life.”—GRANT'S *Nestorians*, p. 63.

“Among the Arabs of Sinai and (others) it is an established rule, that neither men nor boys should ever drive the cattle to pasture. A boy would feel himself insulted were any one to say, ‘Go, and drive your father’s sheep to pasture,’—these words, in his opinion, would signify, ‘You are no better than a girl.’

“This is the exclusive duty of the unmarried girls of the camp, who perform it by turns. They set out before sunset, three or four together, carrying some water and victuals with them, and they return late in the evening....

“Thus early accustomed to such fatiguing duties, the Sinai women are as hardy as the men. I have seen those females running barefooted over sharp rocks where I, well shod, could with difficulty step along. During

the whole day they continue exposed to the sun, carefully watching the sheep; for they are sure of being severely beaten by their father, should any be lost. If a man of their tribe passes by the pasturing ground, they offer to him some sheep's milk, or share with him their scanty stock of water, as kindly as their parents would have treated him in their tent."—BURCKHARDT'S *Notes*, &c., pp. 351, 352.

"We drank ..abundance of goats' milk, that is not only the best in the world, but superior to any other milk I ever tasted; I am not aware of the cause of its superiority unless it be the plants on which they browse. ...We consumed large quantities of it, generally commencing and ending the day by emptying capacious bowls, and the people were often surprised at the number of pints that were ordered; it is sweet, and so light, as to be of quite imperceptible digestion."—*Spain and Spaniards*, vol. i. p. 2.

"Near the plantations of Arguri, we met with a great flock of sheep, and, notwithstanding the advanced season of the year, we suffered exceedingly from the heat;—the obliging shepherd had a little store of sheep's milk ready for himself, and he liberally gave us as much of it as we desired. I found it an excellent cooling drink, which may be taken even in the greatest heat without risk, and at the same time, of an extremely agreeable flavour."—PARROT'S *Journey to Ararat*, p. 237.

Dr. Grant on one occasion passed the night in a Koordish encampment. "Our tent," he writes, "was about forty feet long, and eighteen or twenty wide: one side left quite open, while a web of reeds formed the other sides. The ample roof of black hair-cloth was supported by a number of small poles, and secured with cords and wooden pins driven into the earth. About one-fourth of the tent was fenced off with a wicker trellis for the lambs of the flock, which were kept there during the night. The lambs are only suffered to go to their dams at particular times to obtain nourishment,

after the people have secured the larger share of the milk for themselves. The *milk* of their flocks is a more important consideration with an Oriental than the wool or the flesh. It is regarded as quite superior in quality to the milk of cows, especially for their favourite sour curd.”—GRANT’S *Nestorians*, p. 93.

“A traveller once asserted to a Syrian shepherd, that the sheep knew the *dress* of their master, not his *voice*. The shepherd, on the other hand, asserted that it was the *voice* they knew. To settle the point, he and the traveller changed dresses, and went among the sheep. The traveller, in the shepherd’s dress, called on the sheep, and tried to lead them; but ‘they knew not his voice,’ and never moved. On the other hand, they ran at once at the call of their owner, though thus disguised.”—*Narrative of a Mission to the Jews*, p. 174.

“The business of the day being over, we enjoyed a walk outside the Zion gate....Two flocks were moving slowly up the slope of the hill, the one of goats, the other of sheep. The shepherd was going before the flock, and they followed, as he led the way toward the Jaffa gate.”—*Narrative of a Mission to the Jews*, pp. 173, 174.

“The (African) shepherd with his crook usually goes before the flock, and leads them to fresh pasture, by merely calling out with a loud but slow voice, ‘Hot! hot!’ while the sheep keep nibbling as they follow.”—*Discoveries in Africa*.

“We were struck with the wondrous facility with which a shepherd managed his flock. His sheep knew his voice, and they followed him. We noticed him ‘going before them,’ and them coming after him in rank and file. On his uttering a peculiar cry, they scampered off to the watering-place; and he had only to raise his voice again, to recall them to the pastures. The goats were not so obedient, and they were sure to be in the rear. Yet he had command of them also.”—WILSON’S *Lands of the Bible*.



SHEEP AND SHEPHERDS.

“I saw the sheep following the shepherd, who was playing on a kind of pipe; the goats were on one side of the road, the sheep on the other, and both were following where he led. The sheep at first sight are not unlike the goats. They are dark-coloured, tall, lankey, and bony animals, with long drooping ears.”—HOOD’S *Australia and the East*, p. 391.

“There are some goats at Aleppo, not very large, whose ears are two feet long, and so hang down to the ground, as to embarrass the animal when it feeds.”—RAUWOLF. (To these large ears the prophet Amos appears to allude.)

The Rev. John Hartley, who has travelled as a missionary in Greece, records in his journal the following interesting illustration of our Saviour’s words :—“ Having had my attention directed last night to the words in

John x. 3, I asked my man if it was usual in Greece to give names to sheep. He informed me that it was, and that the sheep obeyed the shepherd when he called them by their names. This morning I had an opportunity of verifying the truth of this remark. Passing by a flock of sheep, I asked the shepherd the same question which I put to my servant, and he gave me the same answer. I then bade him to call one of his sheep. He did so; and it instantly left its pasturage and its companions, and ran up to the hand of the shepherd, with signs of pleasure, and with a prompt obedience, which I had never before observed in any other animal. The shepherd told me that many of his sheep are still *wild*; that they had not yet learned their names, but that by teaching they would all learn them. The others which knew their names, he called tame.”—HARTLEY’S *Researches in Greece and the Levant*, pp. 307, 308.

In Greece, the shepherds count their flocks by admitting them one by one into a pen. This is the custom to which Jeremiah alludes, (xxxiii. 13.) Ibrahim Pasha counted the Greeks who surrendered to him at Navarino in the same manner.—HARTLEY’S *Researches*, p. 364.

“So entirely in these hot climates (*viz.*, Burmah, Pegu, &c.) do sheep lose their distinctive features, that, in seeing them mixed with goats, I never could tell them apart. They are never white, as with us, and their wool degenerates into hair. May not this illustrate, ‘He shall separate them one from the other, *as a shepherd divideth the sheep from the goats?*’ Though an unaccustomed eye could not discern the difference, the shepherd knows each perfectly.

“So though in this world hypocrites mingle with God’s people, and resemble them, the ‘Great Shepherd’ instantly detects them, and at the appointed time will unerringly divide them.”—REV. H. MALCOLM’S *Travels in South-eastern Asia*.

“The desert was now of a more verdant character; and as we proceeded, many flocks of goats were feeding

by the way, some of which had sheep mingled with them ; forcibly reminding us of our Lord's account of the great day. At present, the thoughtless and the hypocrites feed side by side with the children of God in the pastures of this world's wilderness ; but the day is coming when he shall separate the righteous from the wicked, as a shepherd divideth the sheep from the goats. The long curling hair of these goats was of a beautiful glossy black,—showing us at once the beauty and propriety of the description in the song, ‘Thy hair is as a flock of goats that appear from Mount Gilead.’”—*Mission to the Jews*, p. 89.

The shepherds in Modern Greece are poor Albanians, who feed the cattle, and live in huts built of rushes ; they have a tenth part of the milk and of the lambs, which is their whole wages. The cattle belong to the Turks.—*Weekly Visitor*.

In Persia the shepherds frequently drive their flocks into caverns at night, and enclose them by heaping up walls of loose stones ; but the more common sheep-fold was an enclosure in the manner of a building, and constructed of stone and hurdles, or fenced with reeds. It had a large door, or entrance, for admitting the flock, which was closed with hurdles ; and this entrance is still used in the East.

“The word translated *rod* in our version, is probably the club, with an iron-studded head, of the Eastern shepherd, which he uses for the defence of his flock against the attacks of wolves and other ravenous animals. I have known a shepherd in India encounter with it a tiger, which he found mangling one of his goats. It is much in use among the Arabs in general.”—WILSON'S *Lands of the Bible*.

In Greece “every shepherd uses a large wooden crook, with which he guides and defends the sheep. This is the shepherd's rod mentioned in the Psalm and by the prophet.”—*Narrative of a Mission of Inquiry to the Jews*, p. 361.



FAT-TAILED SHEEP.

“Our captain had on board a large sheep of the fat-tailed breed, or as it is sometimes called, the sheep with *five quarters*. This is the only kind of sheep I have ever seen in Persia and the eastern parts of Turkey. Its tail consists of a mass of fat, in the shape of a heart, almost as heavy as a quarter of the animal. The Persians use this fat, to a great extent, in the place of butter and lard.”—PERKINS’S *Residence in Persia*.

“In passing through a large dock of sheep, we remarked how familiar they appeared to be with the shepherd, showing no signs of timidity at his closest approach. Their large heavy tails are also very remarkable. These are chiefly composed of fat, and are particularly referred to in the Mosaic law, as the pieces that were to feed the flame of the sacrifice.”—*Narrative of a Mission to the Jews*, p. 105.

The sheep of Smyrna “have broad tails, hanging down like an apron, some weighing eight, ten, or more pounds. These are eaten as a dainty, and the fat, before they are full grown, accounted as delicious as marrow.”—CHANDLER’S *Asia Minor*, p. 68.

In Spain, where many Eastern customs are preserved from the Moors, they have, to this day, over each flock of sheep, a chief shepherd. “Ten thousand compose a flock, which is divided into ten tribes. One man has the conduct of all. He must be the owner of four or five hundred sheep ; strong, active, vigilant, intelligent in pasture, in the weather, and in the diseases of the sheep. He has absolute dominion over fifty shepherds and fifty dogs, five of each to a tribe. He chooses them, he chastises them, or discharges them at will. He is the *præpositus* or *chief* shepherd, of the whole flock.”

How beautiful, after reading this, appears the title given by the Apostle to Jesus Christ—the Chief Shepherd of the Church of God. He is the owner of many sheep, whom he has purchased with his own blood—he has all power in heaven and in earth—his activity never wearies—his watchful eye never slumbers nor sleeps—the spirit of wisdom and understanding rests upon him without measure—and he is the Great Physician, who alone can heal. He is the Head over all things to his Church, and it is he who alone chooses, guides, and directs those his under-shepherds, to whom he has given it in charge to feed his flock until such time as he shall return to gather them into one fold, under one shepherd—even himself.

PET LAMBS.

2 SAM. xii. 3.

“The poor man had nothing, save one little ewe lamb, which he had bought and nourished up : and it grew up together with him and with his children ; it did eat of his own meat, and drank of his own cup, and lay in his bosom, and was unto him—as a daughter.”

“On July 3rd (sixth Sunday after Trinity), the lesson containing the parable of Nathan to David, on the poor man and his ewe lamb, brought to mind the same sort of attachment as equally prevalent here at the present day. The poor among the natives are very fond of these little pets, whom they ornament and dress up in a very fanciful way. The sepoys frequently have them. While I was at Kwettah, my horse-keeper gave a rupee and a half (three shillings) for a little creature of this kind, which literally occupied his hut and his bed, shared his food, and was his constant companion. It was ornamented with a necklace of ribbons and white shells, and the tip of its tail, its ears, and its feet, were dyed orange-colour. It followed him whenever he took the horse to water or to exercise, and ‘was unto him as a daughter.’”—REV. J. L. ALLEN’S *Scinde and Affghanistan*, p. 208.



PET LAMB.

CHAPTER III.

TREES, PLANTS, ETC., MENTIONED IN SCRIPTURE.

ACACIA, <i>see</i> SHITTIM.	GRASS. — BURNING	OLIVE.
ALGUM-TREE.	GRASS.	ONYCHA.
ALOES.	HEMLOCK.	PALM.
ANISE.	HENNAH, <i>see</i> CAM-	PANNAG.
APPLE-TREE, <i>see</i> CIT-	PHIRE.	PINE.
RON.	HYSSOP.	PLANE-TREE.
APPLES OF SODOM,	JUNIPER.	PLANT OF RENOWN.
<i>see</i> VINE OF SODOM.	JONAH'S GOURD, <i>see</i>	POMEGRANATE.
BALM.	CUCUMBER.	POPLAR.
BAY.	LADANUM.	QUINCE.
BDELLIUM.	LENTILS.	REEDS, RUSHES,
BOX-TREE.	LIGN ALOES, <i>see</i>	FLAGS, &c.
CALAMUS.	ALOES.	RETEM.
CAMPHIRE.	LILY.	ROSE OF SHARON, <i>see</i>
CAPER.	LOCUST, OR CAROB-	LADANUM.
CASSIA.	TREE.	RUE.
CEDAR.	LOTUS, <i>see</i> REEDS, &c.	SAFFRON.
CINNAMON.	LOTUS <i>Tree</i> , <i>see</i>	SHITTIM-WOOD.
CISTUS, <i>see</i> LADANUM.	THORNS, &c.	SOAP.
CITRON.	MALLOWS.	SPIKENARD.
CHESNUT.	MANDRAKE.	STACTE.
COCKLE.	MANNA.	STORAX.
CORIANDER.	MELON, <i>see</i> CUCUMBER.	SYCAMORE.
COTTON.	MILLET.	TARE.
CUCUMBER.	MINT.	TEREBINTH, OR TUR-
CUMMIN.	MULBERRY-TREE.	PENTINE-TREE.
CYPRESS.	MUSTARD.	THORNS AND THISTLES.
DOVE'S DUNG.	MYRRH.	TIEL-TREE.
EBONY.	MYRTLE.	VINE.
FIG-TREE.	NIGELLA, OR BLACK	VINE OF SODOM.
FITCHES.	SEED, <i>see</i> FITCHES.	WHEAT.
FLAGS, OR WATER-	NUTS.	WILD VINE, <i>see</i> VINE
WEED, <i>see</i> REEDS, &c.	OAK.	WILLOW.
FLAX.	OAK SCARLET-BEAR-	WORMWOOD.
FRANKINCENSE.	ING.	ZUKKUM.
GALBANUM.	OLEANDER, <i>see</i> BAY.	DWELLING UNDER
GHURKUD.	OLEASTER, OR WILD	TREES.
GOURD, <i>see</i> CUCUMBER.	OLIVE, <i>see</i> ZUKKUM.	TERRACED HILLS.



ALGUM, OR ALMUG.

1 KINGS x. 11.

“And the navy also of Hiram...brought in from Ophir great plenty of almug-trees.”

2 CHRONICLES ix. 11.

“And the king made of the algum-trees terraces to the house of the Lord, and to the king’s palace, and harps and psalteries for singers.”

REVELATION xviii. 12.

“All thyine wood.” [2 CHRON. ii. 8.]

“The tree, called in Scripture the Algum, Almug, or Thyine tree, is still met with under a different name in the north of Africa. The wood is of a dark nut-brown colour, close-grained, and very fragrant. It was used in building the temple at Jerusalem, and the beautiful palaces of King Solomon, and is mentioned by ancient writers as being particularly desirable, from its durability, for all such buildings. The Romans had tables made from this wood in their banqueting-halls, and ‘they were valued according to the veins, knots, and colours which variegated them; and were called from those accidents,’ tiger, leopard, peacock’s feather tables, &c. We read of one table of this kind which the Emperor Tiberius had plated all over with one of the precious metals. This tree yields the gum sandarach, used in preparing parchment; and therefore very necessary to the Jews, who used so large a quantity of that article in the copies of their Scriptures, and in their phylacteries. St. John mentions this tree as among the precious things that shall no longer attract the merchants of the earth to fallen Babylon.”—See *Scripture Herbal*, pp. 2—7.

ALOES, LIGN ALOES.

NUMBERS xxiv. 6.

“As the trees of lign aloes which the Lord hath planted.”

PSALM xlv. 8.

“All thy garments smell of myrrh, and aloes, and cassia.”

SONG OF SOLOMON iv. 14.

“...Aloes, with all the chief spices.”

JOHN xix. 39.

“...Nicodemus...brought a mixture of myrrh and aloes.” [Prov. vii. 17.]



ALOES.

“ This plant itself is not mentioned in Scripture ; and all the texts in which aloes are named relate to the gummy substance procured from the aloe, either by making incisions, and carefully collecting the juice that exudes, or by bruising the fleshy leaves. In either case the liquor is set by in an airy place in the shade, and carefully skimmed for many days successively ; when it is sufficiently thick, it is laid out in the sun to dry, and then packed in skins or boxes. The taste is intensely bitter, but the smell very agreeable. It was one of the drugs used by the ancients, particularly the Egyptians, for embalming the dead. The strong sweet odour, and the bitterness combined, kept off destructive reptiles

and insects ; and myrrh, having the same qualities, was employed, together with aloes, for the same purpose.

“ The modern medicinal aloes are collected from various species of aloe ; some growing in Asia...some in the West Indies...but the Socotrine aloe is the best. It is a beautiful plant, growing to the height of five or six feet, with vivid green leaves, and a flower of scarlet, white and green. It owes its name to the island of Socotra, lying at the mouth of the Dead Sea ; and probably the method of collecting and managing the juice, which gives the Socotrine aloe the superiority over others, is a relic of the ancient Egyptian priests and embalmers, who made so much use of it, and possibly might have their agents on the island, near as it is to Egypt, for the purpose of buying it up.

“ Some species of aloe*...grow in desert sandy places, where no water is. They are, nevertheless, the sign of refreshment to the traveller ; for their long thick leaves are each gathered round the stem, forming a cup, which collects the rain and dew in such quantities, that the thirsty may drink, and the weary rest and drink again, of this desert fountain.”—*Scripture Herbal*, pp. 11—15.

“ Great quantities of the common aloe grow upon the plains that surround Muscle Bay. The inspissated juice of this plant was once an article that afforded a considerable profit to those who were at the trouble of collecting and preparing it, but the price is now reduced so low, about threepence the pound, that it is no longer considered as an object worthy the attention of the inhabitants. Three pounds are as much as one person can collect and prepare in one day.”—BARROW'S *Southern Africa*.

“ We passed...many species of the aloe, some throwing out their clusters of flowers across the road, and others rising above the rest in spikes of blood-red blossoms not less than fifteen feet in height.”—BARROW'S *Africa*.

* More correctly Agave, but in common speech called Aloes, though improperly.



ALOES.

“The tree producing the fragrant aloe-wood was long unknown to modern naturalists. At length European merchants and missionaries discovered that it was produced in India, and in the Eastern Islands. A Romish missionary had a branch of the tree sent him from Cochin China, where he was informed it grew among the mountains in the neighbourhood of the great river Laoum; a situation agreeing most remarkably with the words of the text: ‘As gardens by the river’s side; as the trees of lign aloes which the Lord hath planted.’

“At length some young trees, which had been sent from the mountainous part of Silhet to the botanic garden at Calcutta, produced flowers and fruit in the years 1809 and 1810.

“The lign aloe is a native of the mountainous parts of the east and south-east of Silhet, where it grows to

the great height of one hundred and twenty feet, having a trunk of twelve feet in girth. In Asam it is of still larger growth. The bark of the trunk is smooth and ash-coloured; that of the branches grey, lightly striped with brown. The branches themselves are each divided into two at the extremities, and the young shoots are covered with white silky hairs. The wood is white, and very light and soft. It is totally without smell, and the leaves, bark, and flowers also. The leaves are of a beautiful deep shiny green, lance-shaped, and from three to six inches long. The flowers, which are small and yellowish, grow in tassels of thirty or forty together, almost close to the branches, and between the alternate footstalks of the leaves. The fruit is a sort of downy pale-green berry, containing two cells for seeds, one of which is often empty. The incense, or perfume of the lign aloes is procured from the wood when in a peculiar state, and the procuring it is a precarious and tedious business. Few trees contain any of it; and such as do, have it very partially distributed in the trunk and branches.

“The people employed in cutting it go two or three days’ journey into the hill country, and hew down without choice all the trees, young and old, fresh and withered,—the latter being much preferred. In order to find the fragrant part, the moment a tree is felled they chip off the bark, and cut into the wood, until they find some dark-coloured vein, which generally encloses, in the very centre of the trunk or branch, a hollow wherein is deposited the oily substance sought for. This dark portion of the tree sinks immediately in water, and fetches a high price. That which is next, and retains some of the perfume, sinks, but not deep;—and there are still two other portions of different degrees of scent, which are saleable, though they fetch only one-sixteenth of the price of the first.

“It appears that the decay of the timber necessary to form the secretion of the fragrant oil is hastened by

burying it in moist ground for a time. When dug up, the dark parts are found to have acquired, besides a deeper colour, a glossy appearance, and the whole sinks in water ; the precious veins are separated from the less valuable portion with an iron instrument, and the rest of the wood is sorted into the three inferior kinds, as in the naturally decayed trees. The oil is extracted by bruising the wood, and then laying it in water ; after which the whole is distilled, and the produce of the still in cooling yields the essential oil. An inferior perfume is prepared from the remainder of the aloe-wood after its first distillation, with the addition of a few bruised almonds, or powdered sandal-wood.

“Some of the choicest pieces of the aloes sell for their weight in gold. They seem to have no smell, until warmed by holding in the hand, when they become dewy, and exhale a most delicious odour, which does not soon go off. Some fragments of a piece of the wood which had been in England several years, and appeared to have lost its smell, were burnt in a room, when at first they appeared to give out no fragrance, but shortly afterwards the perfume was perceived, and it did not go off for some time.

“This tree yields also a valuable medicine.”—See *Scripture Herbal*, pp. 235—242.

ANISE.

MATTHEW xxiii. 23.

“Woe unto you, Scribes and Pharisees, hypocrites ! for ye pay tithe of mint, and anise, and cummin, and have omitted the weightier matters of the law, judgment, mercy, and faith.”



“The seeds of this herb have a pleasant smell, and are often chewed by the inhabitants of Eastern countries, to sweeten the breath,—a large kind of anise grows in England, but its seeds are not much thought of, and a great quantity of them are imported from Malta for the apothecary’s use, as they are still used as a good stomachic. Pliny tells us that in ancient times, no kitchen was without a good supply of anise, which was used as a pot-herb, green or dry, and in sauces,” &c.



BALM.

GENESIS xxxvii. 25.

“Behold, a company of Ishmeelites came from Gilead, with their camels bearing spicery and balm, and myrrh, going to carry it down to Egypt.”

xliii. 11.

“Carry down the man a present...a little balm,” &c.

JEREMIAH viii. 22 ; xlv. 11.

“Is there no balm in Gilead ?”

li. 8.

“Take balm for her pain, if so be she may be healed.”

This tree, which produces the precious balsam, or balm of Gilead, is not a *native* of that country. It has

nowhere been found wild, except on the African coast of the Red Sea. Its produce is mentioned as an article of merchandise, in the book of Genesis—and Josephus says that the Queen of Sheba presented some plants of it to Solomon. The road by which the balsam reached Greece and Rome is pointed out by Ezekiel, who says that Israel and Judah supplied the markets of Tyre with it, and the merchants frequenting Tyre carried it, of course, further west. So highly prized was the balsam, that, during the war of Titus against the Jews, two fierce contests took place for the balsam orchards of Jericho; the last of which was to prevent the Jews from destroying the trees, which they would have done in order that the trade might not fall into the enemy's hand.... An imperial guard was appointed to watch over them... but such care has been unavailing; not a root nor a branch of the balsam tree is now to be found in all Palestine.

Twice was a balsam tree exhibited in triumph to the Romans in their streets. The first time was sixty-five years before the coming of our Lord, when Pompey returned from his conquest, and Judæa first became a Roman province, and the last time was after a lapse of one hundred and forty-four years, when the spoils of the temple of Jerusalem were borne in triumph through the imperial city; and, as a sign of the subjection of the whole country, the precious balm-tree was exhibited with pride by Vespasian. The great traveller Bruce saw the balsam-tree in some valleys in Arabia. The most considerable garden of them is in a recess of the mountains, between Mecca and Medina. The balm of Gilead is a small ever-green tree,—at five feet from the ground it branches out something like an old hawthorn, but the foliage is scanty and ragged. The bark is smooth, shining, and of a whitish grey colour, with brown blotches. The leaves are of a bright green, and grow in threes and fives.

The greatest quantity of the balsam flows from the wounded bark. But there are three kinds procured by

art : the first and best is the opobalsam, expressed from the green berry, the second is from the ripe nut or berry; and the last is obtained by bruising and boiling the young wood.—See *Scripture Herbal*, pp. 31—37.



BAY.

PSALM i. 3.

“ And he shall be like a tree planted by the rivers of water, that bringeth forth his fruit in his season ; his leaf also shall not wither.”

PSALM xxxvii. 35.

“I have seen the wicked in great power, and spreading himself like a green bay-tree.”

The green bay is not very common in Judæa, though it is found in the ancient gardens of Tyre and Sidon. But the rose bay, or oleander, grows everywhere ; and lovely and luxuriant it is ; whether by the banks of Jordan, or the lake of Tiberias, or in some quiet valley by the side of a stream. Robinson mentions it as being abundant in the neighbourhood of Petra, blooming in the valleys, and “forming with its myriads of large red blossoms a striking contrast to the desert rocks around.”

Burckhardt speaks of a rivulet running in a deep valley through a wood of oleanders, “which form a canopy over the rivulet impenetrable to the meridian sun. The red flowers of these trees, reflected in the river, gave it the appearance of a bed of roses, and presented a singular contrast to the whitish grey rocks which border the wood on either side. The water is almost warm, and has a disagreeable taste, occasioned probably by the quantity of flowers that fall into it.”—ROBINSON’S *Researches*, vol. ii. p. 509.—BURCKHARDT’S *Syria*, p. 369.

Seeing that the oleander is so constantly found by the waters of Palestine, there is some interest in the question proposed by Hasselquist, who in one of his letters to Linnæus, writes :—“I request you will please to ask Dr. Celsius whether the writers on Scripture plants have ever thought what vegetable David refers to in Psalm i. 3, under the name of the tree of the righteous. David attributes qualities to the tree which plainly show that he has in view some particular vegetable. And these qualities are such that they cannot be attributed to any but the oleander which grows in abundance in this country.”

BDELLIUM.

GENESIS ii. 12.

“There is bdellium.”

NUMBERS xi. 7.

“The colour...(of the manna was) as the colour of bdellium.”

This gum, the produce of India, is clear, and of a whitish colour—and was offered, steeped in wine, to the gods of Rome.

BOX.

ISAIAH xli. 19.

“I will set in the desert the fir-tree, and the pine, and the box-tree together.”

lx. 13.

“The glory of Lebanon shall come unto thee, the fir-tree, the pine-tree, and the box together, to beautify the place of my sanctuary.”

In the Apocryphal book of Esdras a very important purpose to which box-wood was anciently applied is pointed out. He was told to prepare many box-trees, and to take five scribes to write upon them. Esdras was a captive in Babylon, and, therefore, no doubt used the writing materials common in that country. These, it appears, were tablets of box, probably waxed over to receive the impression of the iron pen. Such tablets were in use in Greece and Rome, among writers and painters—and were employed for private letters, as well

as for public dispatches. It is thought that the word ivory in Ezekiel xxvii. 6, ought to be translated box-wood ; as it seems more likely that the rowers' benches should have been made of box-wood than of ivory. The prophet says, expressly, that the materials of those benches were brought from the isles of Chittim ; the chief of which island (supposed to be Sardinia) abounds in box-trees.

Among the ancients, such furniture as admitted of carving, coffers for jewels, &c., were made of the root of the tree, while the writing-tables were made of the plain, smooth, yellowish wood of the trunk. Amongst ourselves, box has become of great importance, as the best material for blocks for the wood-engraver. It is sufficiently tough, fine in the grain, and little apt to split. It is a native of England, but has almost disappeared, as such, before the spade and the plough. A dwarf kind is much used for garden bordering.—See *Scripture Herbal*, pp. 57—60.

CALAMUS, OR SWEET CANE.

EXODUS xxx. 23.

“Take...of sweet calamus two hundred and fifty shekels.”

ISAIAH xliii. 24.

“Thou hast bought me no sweet cane with money.”
[Canticles iv. 14 ; Ezek. xxvii. 19.]

The sweet cane was reckoned among the principal spices and perfumes of which the precious oil for the service of the tabernacle was composed. The plant mentioned under this name in Scripture, has been, like the spikenard, much sought after ; and, if found at all,



it is only of very late days. There are numerous aromatic canes and grasses in India, one of the most remarkable of which is the Koosa grass, of which so much use is made in the hot season. The roots are woven very neatly into screens or mats, which are sprinkled with water, and suspended before the open doors or windows, so that the breeze in passing through them is cooled, while a slight but very agreeable fragrance is diffused around. The roots of the Koosa grass have the property of repelling insects, and are therefore laid among clothes of every kind. There are many other grasses in India from which fragrant and medicinal oils are extracted, and in one of them Dr. Royle thinks he has discovered the Sweet Cane of Scripture. It is

from a far country ; it is very fragrant in itself, and the aromatic oil obtained from it would contribute to the odour of the costly perfume which Moses was enjoined to make, according to the art of the apothecary, for the service of the tabernacle.—See *Scripture Herbal*, pp. 73—77.



CAMPHIRE—AL HENNAH.

SONG OF SOLOMON i. 14.

“ My beloved is unto me as a cluster of camphire in the vineyards of Engedi.” [iv. 13.]

“The chief branch of trade for which Gabs, in Africa, is famous at present, arises from this tree, which is plentifully cultivated in all their gardens. This beautiful odoriferous plant, if it is not annually cut and kept low, grows ten or twelve feet high; putting out its little flowers in clusters, which yield a most grateful smell like camphor, and may therefore be alluded to in Canticles i. 14. The leaves of this plant, after they are dried and powdered, are disposed of to good advantage in all the markets of the kingdom. For with this, all the African ladies that can purchase it, tinge their lips, hair, hands, and feet, rendering them thereby a tawny saffron colour, which with them is reckoned a great beauty. The al hennah requires to be frequently watered.” Clusters of these flowers are hung in the rooms at Cairo.—DR. SHAW.

“I dined near groups of the henna tree, which diffused their fragrance all around. Its leaves are small, and of a light green colour, and it bears berries in clusters also of a delicate pale green, with flowers of a white and yellow colour. This is the tree from which the Egyptians and Turks obtain the dye used for the palms of their hands and nails.”—MADDOX'S *Excursions*, &c., vol. i. p. 285.

CAPER.

ECCLESIASTES xii. 5.

“Desire shall fail; because man goeth to his long home.”

It was the custom anciently, before an entertainment, to present the guests with some eatable which was thought to excite the appetite. This is what is meant by *desire* in the text: viz. stimulants to excite an appetite for food; and the plant there alluded to as

exciting this appetite is the caper, the flower-buds of which, preserved in salt, or vinegar, were much used in the East. The preacher declares that even these shall fail, for man goeth to his long home. The caper-bush is a low trailing shrub, and loves to creep over rocks and ruins, and is found now in the neighbourhood of Jerusalem, hanging among the tombs, and blossoming about the Pool of Siloam. It is a pretty plant, with glossy green leaves, and white flowers, with many long purple anthers.

Capers are imported into England now from the Mediterranean and other parts, and are eaten in sauce.

CASSIA.

EXODUS xxx. 24.

“And of cassia five hundred shekels.”

PSALM xlv. 8.

“All thy garments smell of...cassia.”

[EZEK. xxvii. 19.]

There are two sorts of cassia, both of which may be alluded to in Scripture. Their English names are cassia-buds and common cassia. The cassia-bud is a native of India, China, and the Eastern Islands; and produces the flowers and buds of commerce. Moses was directed to prepare the ointment for the tabernacle with cassia; and David mentions it among the choice perfumes of the Spiritual Bride. Ezekiel speaks of it as among the merchandise brought to Tyre, and he mentions with it the sweet cane and bright iron,—all three the produce of India, where the Hindoos, with their very small furnaces, prepare iron with a perfection we



have not attained. The common cassia is a large tree, sometimes forty or fifty feet high, and is a native of Arabia and Egypt. The drug is the round pod, from ten to twenty inches long, with its seed. The pod is subdivided by transverse scales separating the seeds, which are embedded in a sweet pulp. It is prepared by the Arabs, in whole pods, with only the trouble of alternate heaping up and spreading for a certain number of days. The taste is so agreeable, that they make comfits of it, which used to be brought into Europe and used in medicine, and in its native country the common cassia is valued as a perfume.—See *Scripture Herbal*, pp. 88—90.



CEDAR.

1 KINGS v. 6—9.

“Now therefore command thou that they hew me cedar-trees out of Lebanon.... And Hiram sent to Solomon saying,...I will do all thy desire concerning timber of cedar, and concerning timber of fir. My servants shall bring them down from Lebanon unto the sea, and I will convey them by sea in floats unto the place that thou shalt appoint me.”

PSALM lxxx. 10.

“The boughs thereof were like the goodly cedars.”

xcii. 12.

“The righteous...shall grow like a cedar in Lebanon.”

CANTICLES v. 15.

“His countenance is as Lebanon; excellent as the cedars.”

EZEKIEL xvii. 5.

“They have taken cedars from Lebanon to make masts for thee.”

xxx. 3, 6.

“Behold, the Assyrian was a cedar in Lebanon, with fair branches, and with a shadowing shroud, and of a high stature; and his toe was among the thick boughs. All the fowls of heaven made their nests in his boughs.”

[Read the whole chapter.]

[1 Kings vi. 15, &c.; vii. 2, 3, 12; x. 27. 2 Kings xix. 23. 2 Chron. xxv. 18. Ps. cxlviii. 9. Isai. ii. 13; xiv. 8; xli. 19; Jer. xxii. 7, 14, 23. Ezek. xvii. 3, 22, 23.]

CEDARS OF LEBANON.

“I was at first disappointed in (their) appearance. I had expected to have seen them scattered along the mountain,...but here was a snug, compact little brotherhood, gathered together in the most social group; no other tree was visible within several miles. When, however, I reached the forest, after two hours' steep and difficult descent, I found my largest expectations realized, and confessed that it was the most magnificent specimen of forestry I had ever seen. It was delightful to pass out of the glowing, fiery sunshine into the cool, refreshing gloom of those wide flaky branches,—that vast cedar shade, whose gnarled old stems stood round like massive pillars....One of the greatest charms of this secluded forest must have been its deep solitude....There are twelve old trees, or Saints, as they are called,...yes, twelve, I will maintain it, are there standing now. It is natural that there should be a diversity of opinion, perhaps, as the forest consists of about one thousand

trees, among which there is a succession of all ages : nevertheless, there (are twelve) first-rate in size and venerable appearance. The largest of these is forty-five feet in circumference. Many of them are scarred with travellers' names....That night's encampment was one to be remembered. My tent was pitched on a carpet of soft green sward, under the wide-spread arms of one of the old trees. At a little distance the watch-fire blazed up against a pale grey cliff, its red gleam playing on the branches beneath, and the silvery moon shining on them from above, produced a beautiful effect, as they trembled in the night-breeze, and their dark-green leaves seemed shot alternately with crimson and with silver ; then the grouping of the servants, and the mountaineers in their vivid dresses, and the horses feeding in the background."—WARBURTON'S *Crescent and Cross*, vol. ii. pp. 244—6.

"Let (a man) after a long ride in the heat of the sun, sit down under the shade of a cedar, and contemplate the exact conical form of its top, and the beautiful symmetry of its branches, and he will no longer wonder that David compared the people of Israel, in the days of their prosperity, to the *goodly cedars*."—*Memoirs of Rev. Pliny Fisk*, p. 302.

"The oldest trees are distinguished by having the foliage and small branches at the top only, and by four five, or even seven trunks springing from one base ; the branches and foliage of the others were lower. The trunks of the oldest trees seem to be quite dead ; the wood is of a grey tint."—BURCKHARDT.

"The cedars cover about three acres. The venerable patriarch trees, which have stood the blasts of thousands of winters, amount only to twelve, and these not standing close together in the same clump ; but those of a secondary and still younger growth, as nearly as can be reckoned, to three hundred and twenty-five. A person can walk easily round the whole grove in twenty minutes. The most curious instance of vegetable growth

which we noticed in it, was that of two trees near its western side, stretching out their horizontal branches, and, after embracing, actually uniting, and sending up a common stem. We measured all the larger trees, one of which, at least, we found to be forty feet in circumference. We were sorry to observe the names of many travellers most savagely cut on their trunks. A monk came to us to beg some aid for the erection of an oratory under their shade ; but we told him that God had already made a temple there, and that no other was required. In order to gain our favour, he proceeded, with the help of an assistant whom we had, to strike down some of their boughs to present them to us. While we protested against his injury of the old trees, we carried off the pieces which he had cut. The wood,...is remarkably compact and solid, and of a fine grain, and capable of being cut and carved into ornamental pieces of furniture, and highly and delightfully scented. It is called by the natives of Lebanon by the Arabic name of *araz*, the very name which, with the usual alteration of the vowel points, it bears in the Hebrew Scriptures. We read under the grove, with the deepest interest, the allusions to the Erez which are mentioned in the Bible ; and almost every one we thought applicable to the tree before us, even those in which it is represented as forming masts for ships, and beams and rafters for houses, while we were convinced that some of them are applicable to no other species of pine. The pre-eminence of stature, length of branch, and extent and beauty of shroud, and shadow, and covert, spoken of by Ezekiel,* are to be found in the cedar, and not in the pines,—the same as those on our Scottish mountains,—or the cypresses, or junipers, which are to be seen in abundance in Lebanon and other parts of Syria.

“In the whole range of Lebanon there are only one or two more clumps of cedars, and these of no great extent, to be found in the present day.”†—WILSON’S *Lands of the Bible*.

* Chap. xxxi.

† Isaiah x. 19.



CINNAMON.

EXODUS xxx. 23.

“Sweet cinnamon”...

REVELATION xviii. 12, 13.

“The merchandise of...cinnamon.”

The cinnamon-tree, or rather shrub, grows in Ceylon, and other neighbouring islands. Neither the leaves nor flowers give forth any smell ; and it is not till the season for gathering the spice arrives, that a walk through cinnamon gardens would give much pleasure in respect

of fragrance. But *then* it is charming ; and the busy groups of Cingalese, peeling the twigs, which are cut annually, add interest to the beauty of the gardens. The bark is stripped off with astonishing quickness, by means of a sharp iron instrument, and laid in the sun, where it curls up into the shape of the cinnamon sticks we see in our shops.—See *Scripture Herbal*, p. 106.

CITRON.

LEVITICUS xxiii. 40.

“And ye shall take you on the first day the boughs of goodly trees...and ye shall rejoice before the Lord.”...

PROVERBS xxv. 11.

“A word fitly spoken is like apples of gold in pictures (baskets) of silver.”

CANTICLES ii. 3, 5.

“As the apple-tree among the trees of the wood, so is my beloved among the sons. I sat down under his shadow with great delight, and his fruit was sweet to my taste... Comfort me with apples”...

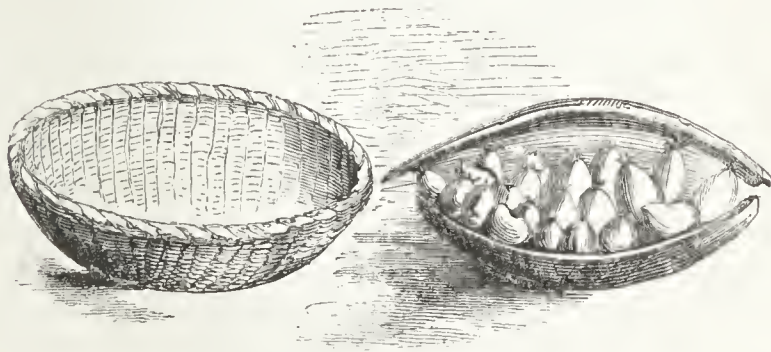
The fruit which *we* call apples, are in Judæa both rare and of a very poor kind. But the *citron* exactly agrees with the description given in Scripture of that which has been rendered in our translation “*apple-tree*.”

Citron-trees are very noble, being large, and their leaves very beautiful, always continuing upon the tree, of an exquisite smell, and affording a most delightful shade. The orange-tree is so like the citron that a common observer can hardly distinguish between them

when they are not in fruit—and even the *colour* of the latter is the same in both, viz., that of *gold*. A traveller, describing the palace of a prince, on the coast of Syria, prefers the *orange-garden* to everything else, the walks being shaded with orange-trees of a large spreading kind, and *gilded* with fruit.

The fragrancy of the citron is admirable, and the peel is as reviving as the juice is refreshing. We are told of an Arabian who was in a great measure brought to himself, when overcome by wine, with the help of *citrons* and coffee. “His fruit was sweet to my taste. Stay me with flagons, (with wine, that is, that was given to those who were faint,) comfort me with citrons,” which are so refreshing. The first-fruits were carried to the Temple at Jerusalem in silver baskets; and Solomon represents a word fitly spoken as being beautiful as golden citrons shining through the net-work of silver baskets.

It is supposed that the *goodly tree* mentioned in Lev. xxiii. 40, means the citron, for Josephus informs us that at the feast of Tabernacles every one was required to have boughs of the palm and *citron-trees* in their hands. The lemon is only a variety of the citron, as also is the lime.



FRUIT-BASKETS.

CHESNUT. See PLANE-TREE.

GENESIS xxx. 37.

“And Jacob took him rods of...the chesnut-tree.”

EZEKIEL xxxi. 8.

“The chesnut-trees were not like his branches.”

In some of the southern countries of Europe, the fruit of the chesnut is used as food, and is much esteemed. Great quantities of Spanish chesnuts are brought into England, roasted and eaten hot as a winter fruit. There were once fine chesnut forests in England, but now the nuts of such trees as we have are small, and only used for feeding deer. The wood of this tree is valuable, as it is not easily affected by change of weather, and is therefore much employed by the cooper. The chesnut lives to a great age. There is one at Tortworth, in Gloucestershire, which was a fine tree six hundred and eighty years ago.

During the present year (1846) the crop of chesnuts in the Great Park at Windsor, has been immensely large. Prince Albert has issued an order that every poor person applying for leave to gather these chesnuts, shall be provided with a ticket of leave, and well paid for every bushel of chesnuts brought into store. Great numbers of men, women, and children, are consequently set to work (October), and the Prince has kindly ordered that the chesnuts, at the close of the gathering, shall be delivered to the overseers of the adjoining parishes, converted into money or bread, and distributed for the relief of the distressed poor. A poor man and his boy collected three bushels in three hours, and were paid eight shillings on delivering them.

COCKLE.

JOB xxxi. 40.

...“cockle instead of barley.”

The corn-cockle is sure to spring up among crops of wheat and barley. It is a great nuisance to the farmer; but the flower itself is pretty, and was used in braiding wreaths for guests at feasts. The plant grows upright, is branched, and hairy all over. The Latin name means the crown of the field, from the beauty of the flowers.

CORIANDER.

EXODUS xvi. 31.

“It was like coriander-seed, white.”

Coriander was a favourite pot-herb in the most ancient times. The Eastern people, rich and poor, chew it for its pleasant flavour. It is grown in England, particularly in Suffolk, and is used by the apothecary and distiller. The poor Indian mixes its seeds with his curry, and it is equally welcome at the tables of the rich.

COTTON.

ESTHER i. 6.

“Where were white, green, and blue hangings, fastened with cords of fine linen and purple to silver rings.” (These hangings are supposed to have been of cotton, fastened with cords of fine flax, or cotton.)

“Cotton is a white, woolly, or downy substance, found in a brown bud, produced by a shrub, the leaves of which resemble those of the sycamore-tree. The bud, which grows as large as a pigeon’s egg, when ripe, turns black, and divides at top into three parts ; the cotton is as white as snow, and with the heat of the sun, swells to the size of a pullet’s egg.”—CALMET.

A great deal of cotton is grown in Syria, where it is principally applied to spinning cotton-yarn for coarse clothes, and under garments, sheets, &c.

There is a good deal of oil in the cotton-seeds, and, sometimes, when any have been left in bales of cotton, they have given out oil enough to take fire when air has been admitted into the bale, and thus ships at sea have been destroyed.

“Cotton seed bruised is very much used for feeding sheep, bullocks, asses, and camels. These animals soon become extremely fond of it, and it is an excellent food for fattening them.”

“Cotton, after it is gathered from the shrub, is prepared by the careful housewife, or a steady female slave, by laying a quantity of it on a stone, or a piece of board, along which she twirls two slender iron rods, about a foot in length, and thus dexterously separates the seeds from the cotton-wool. The cotton is afterwards teazed, or opened out with a small bone ; women then spin it out of a basket upon a slender spindle. The basket always contains a little pocket-mirror, used at least every five minutes, for adjusting or contemplating their charms. It is now sold as yarn, or made into cloth. The common cloth of the country is only three or four inches broad. The weaver’s loom is very simple, having a fly and treadles like ours, but no beam ; and the warp, fastened to a stone, is drawn along the ground as wanted. The shuttle is passed by the hand. When close at work, they are said to weave from twenty to thirty fathoms of cloth a day.”—*Discoveries in Africa.*



COLOQUINTIDA.

CUCUMBERS, MELONS, GOURDS.

NUMB. xi. 5.

“We remember the fish, which we did eat in Egypt freely; the cucumbers, and the melons...”

2 KINGS iv. 39, 40.

“And one went out into the field to gather herbs, and found a wild vine, and gathered thereof wild gourds, his lap full, and came and shred them into the pot of pottage: for they knew them not....And it came to pass, as they were eating of the pottage, that they cried out, and said, ‘O thou man of God, there is death in the pot! and they could not eat thereof.’”

ISAIAH i. 8.

“The daughter of Zion is left...as a lodge in a garden of cucumbers.”

JONAH iv. 6, 7.

“And the Lord God prepared a gourd, and made it to come up over Jonah, that it might be a shadow over his head . . . So Jonah was exceeding glad of the gourd. But God prepared a worm when the morning rose the next day, and it smote the gourd that it withered.”

“The water-melon serves the Egyptians for meat, drink, and physic. It is eaten in abundance during the season, even by the richer sort of people ; but the common people scarcely eat anything else, and account this the best time of the year, as they are obliged to put up with worse fare at other seasons. They eat them with bread. This fruit likewise serves them for drink, the juice being most refreshing to these poor creatures ; and they have less need of water than if they lived on more substantial food in this burning climate. This fruit also affords physic ; but it is not every kind of melon that answers this end. There is a variety softer and more pulpy than the common sort, and not so plentiful ; when this is very ripe and almost putrid, they hollow out part of it, gather the juice there collected, and mixing it with rose-water and a little sugar, administer it in burning fevers, being the only medicine the common people use in such distempers.”—HASSELQUIST.

The bottle-gourd is eaten by the Arabs, boiled with vinegar. Sometimes they stuff it with meat and rice, and boil it like a pudding. Several sorts of cucumbers are cultivated in Palestine. The shell of the gourd is often used as a water-vessel.

“The musk-melon is a far greater favourite among the Persians than the water-melon....The melon-vines are hoed (if we may so speak) with a *spade*, the American hoe having no place among the farming implements of Persia. The *musk*-melon, at the size of a walnut, is folded up in a leaf from its own vine, and covered over with a thin layer of earth, perhaps to protect it from worms, but more especially, to render the

rind thin, and the fruit sweet. All but two or three of the blows are stripped from each vine, which then yields as many melons. As it grows, it throws off the layer of earth, and the process of covering it is twice more repeated. As it advances it is raised up from its bed and placed upon the ridge, where it rapidly ripens under the alternate night-chills and the hot sun of the clear summer sky. Melons are eaten not only in their season; they are also...kept fresh during most of the winter. For an early crop, the soil is laid out in patches or beds, which are sprinkled over with coarse sand or gravel, to keep the earth warm and preserve it from baking during the rains of spring. Soil thus prepared, is for obvious reasons not hoed (spaded) but weeded, should occasion require. A shelter is effected in the melon-fields, by setting four poles in the earth, binding small rafters across their tops, and covering the frail platform with limbs cut from the poplars and willows on the water-courses, whose leaves, under the scorching sun, soon dry. (This is probably) the lodge, in the garden of cucumbers, which is, in Scripture, made the emblem of Jerusalem in her desolation. This shelter is constantly occupied, in the season of fruit, by the owners, who gather what is ripe during the day, and guard the field from depredations by night."—PERKIN'S *Residence in Persia*, p. 428.

"Returning in the evening through fields of melons, we disturbed the 'keepers of a field,'* the same as those mentioned by the prophet. A rude shed made of four upright poles, that supported a covering of twined branches, protected from the weather an old decrepit Arab, who sat watching against any intrusion that might be made by man or beast upon his field."—*Mission to the Jews*.

"There were along the river (the Nile) a great many water-melons, cucumbers, and other vegetables. It reminded me of the complaint of Israel in the wilderness,

* Jer. iv. 17. —

that they were deprived of the melons and cucumbers of Egypt. Considerable districts lay along the edge of the water, and only a few feet above it, and on them the vegetables above-named, and many others, were raised in great numbers. There was usually a small place in these garden-spots built to protect a person from the rain; whose office it is to prevent pillage, and sell the vegetables to boatmen and passengers."—PAXTON'S *Letters*, p. 248.

There are two kinds of gourds, distinguished for their bitterness, either of which may have been that used by Elisha. The first is called *coloquintida*, and produces the valuable medicine known by that name. Robinson found this near mount Sinai at the latter end of March, when "its yellow fruit was ripe." It is called in English, "the little cucumber." Its tendrils run over a great extent of ground, sometimes several miles, and the gourds are so numerous, as to be crushed under the



GLOBE CUCUMBER.

feet of the passengers, whether men or animals. The dry gourd, when crushed, discharges the valuable drug contained in it, in the form of a powder.

"The colocynthida grows in great abundance—it is used by the Arabs to make tinder, by the following process—after roasting the root in the ashes, they wrap it in a wetted rag of cotton cloth, they then beat it between two stones, by which means the juice of the fruit is expressed, and absorbed by the rag, which is dyed by it of a dirty blue; the rag is then dried in the sun, and ignites with the slightest spark of fire."—BURCKHARDT'S *Syria*, &c., p. 449.

The second sort of gourd is the globe, or prophet's gourd. It is quite as bitter as the colocynthida, and unpleasant to the smell. It is covered with soft prickles.



CASTOR-OIL-NUT TREE.—JONAH'S GOURD.

This is a totally different plant—and seems, with little doubt, to have been the castor-oil-nut tree. This plant is liable to very sudden decay. Its broad tender

leaves afford a delicious shade, and the oil expressed from its seeds was used by the ancients as particularly pleasant for burning, and the Jews still use it for their Sabbath lamps, it being one of the five kinds pointed out by their traditions. Its medicinal virtues appear to be unknown.—See *Scripture Herbal*, pp. 181–183.

CUMMIN.

ISAIAH xxviii. 25, 27.

“Doth he not scatter abroad the fitches, and scatter the cummin.”

“For the fitches are not threshed with a threshing instrument, neither is a cart-wheel turned about upon the cummin ; but the fitches are beaten out with a staff, and the cummin with a rod.”

MATTHEW xxiii. 23.

“Ye pay tithe of...cummin.”

This plant is cultivated on account of its seeds, which are a valuable remedy for the ulcers, &c. arising in cattle from the bites of insects. It was threshed out with a rod, which was not the usual way of threshing among the Jews ; but in Malta, the seeds are beaten out now in the same way. The plant itself is something like fennel, and the taste of the seeds is warm, and rather bitter. Sometimes they are put into cheese and bread, and are thought a good stomachic.



CYPRESS.

ISAIAH xliv. 14, 15.

“He...taketh the cypress...then shall it be for a man to burn, for he will take thereof and warm himself...yea, he maketh a god, and worshippeth it.”

This is a beautiful though somewhat gloomy-looking tree. It tapers into a spire, and is universally planted in Eastern burial-grounds. The heathen used to make their funeral piles of cypress-wood, probably imagining

that its taper head rising straight and high, pointed to the ascent of the departing spirit. The heathen writers mention that the oldest idol statues were made of cypress wood, which is remarkably heavy, and durable. How does this remind us of the prophet's beautiful rebuke to the idol-makers !



DOVE'S DUNG, OR STAR OF BETHLEHEM.

2 KINGS vi. 25.

“ And there was a great famine in Samaria ; and behold, they besieged it, until an ass's head was sold for fourscore pieces of silver, and the fourth part of a cab of dove's dung for five pieces of silver.”

This elegant little flower, of the lily tribe, is but once mentioned in Scripture. It is a native of England, and was commonly eaten in Italy and other southern countries. The bulbous root of this plant has in all times been used as an esculent vegetable, in Syria and the neighbouring countries. It was sometimes dried, pulverised, and mixed with bread flour; and it was also eaten both raw and roasted. Of the thirty-six known species, one bearing a yellow flower yielded the most agreeable food. The peasants of Italy often roasted the roots, and ate them like chesnuts; or lightly boiled them, and peeled and used them as salad, with oil, vinegar, and pepper. The plains and valleys about Samaria abound in this pretty flower; and the dearth of its roots, was a token of famine beyond endurance. There are several pretty varieties of this plant in Spain and Portugal, but scarcely more agreeable to the sight than our own English star of Bethlehem.—See *Scripture Herbal*, pp. 129—133.





EBONY.

EZEKIEL xxvii. 15.

“They brought thee for a present horns of ivory and ebony.”

This tree is large, shooting up to twenty feet before it branches. The branches are many, and stiff. The fruit is about the size of a small apple, yellow, and pulpy. The bark of the tree is used as medicine by the Hindoos. The fruit is dried, and eaten as a sweetmeat. Sometimes it is called the *date-plum*. The wood of the ebony is greatly prized. It is a fine black, though some kinds are green. The Ethiopians in old time presented the kings of Persia with two hundred logs of ebony every year. The tree is a native of Ceylon.

FIG-TREE.

1 SAM. xxv. 18.

“Then Abigail took...two hundred cakes of figs...”
[figs cured, and then pressed together.]

1 KINGS iv. 25.

“And Judah and Israel dwelt safely, every man under his vine and under his fig-tree, from Dan even to Beersheba, all the days of Solomon.”

2 KINGS xx. 7.

“And Isaiah said, take a lump of figs, and they took and laid it on the boil, and he recovered.” [ISAI. xxxviii. 21.]

ISAIAH xxxiv. 4.

“And all the host of heaven shall be dissolved,...and all their host shall fall down...as a falling fig from the fig-tree.”

HABAKKUK iii. 17, 18.

“Although the fig-tree shall not blossom...yet I will rejoice in the Lord.”

MATTHEW xxi. 19.

“And when he saw a fig-tree in the way, he came to it, and found nothing thereon, but leaves only, and said unto it, Let no fruit grow on thee henceforward for ever. And presently the fig-tree withered away.”

xxiv. 32.

“Now learn a parable of the fig-tree : when his branch is yet tender, and putteth forth leaves, ye know that summer is nigh.”

LUKE xiii. 6.

“A certain man had a fig-tree planted in his vineyard.” [See whole parable.]

REVELATION vi. 13.

“And the stars of heaven fell unto the earth, even as a fig-tree casteth her untimely figs, when she is shaken of a mighty wind.”

[JUDGES ix. 10, 11. 1 SAM. xxx. 12. 1 CHRON. xii. 40. JER. xxiv. 1, 2, &c. AMOS iv. 9. NAH. iii. 12. ZECH. iii. 10.]

“The black and white boccore, or early fig, (the same we have in England) is produced in June; though the kermes, the fig properly so called, which they preserve and make up into cakes, is rarely ripe before August. I have also seen a long dark-coloured fig, that sometimes hangs upon the tree all the winter. For the kermes, in general, continue a long time upon the tree before they fall off; whereas the boccore drop off as soon as they are ripe, and, according to the beautiful allusion of the prophet Nahum, fall into the mouth of the eater upon being shaken.....According to the quality of the preceding season, some of the more forward and vigorous trees will now and then yield a few ripe figs, six weeks or more before the full season. Something like this may be alluded to by the prophet Hosea, ix. 10.

“When the boccore draws near to perfection, then the summer-figs begin to be formed, though they rarely ripen before August; at which time there appears a third crop, or the winter-fig, as we may call it. This is usually of a much longer shape, and darker complexion than the other, hanging and ripening upon the tree even after the leaves are shed, and provided the winter proves mild and temperate, is gathered as a delicious morsel in the spring.

“It is well known that the fruit of these prolific trees always precedes the leaves, and, consequently, when our Saviour saw one of them in full vigour, *having leaves*, he might, according to the common course of nature, very

justly *look for fruit*, and haply find some boccores, if not some winter figs likewise upon it.”—SHAW’S *Barbary*, vol. i. pp. 264, 265; vol. ii. pp. 149, 150.

FITCHES, OR VETCH.

ISAIAH xxviii. 27.

“The fitches are beaten out with a staff.” [EZEK. iv. 9.]

The fitch is a small coarse kind of pea, hard, and not very agreeable, but nutritious; and more than once in England wild fitches have preserved thousands from starvation in time of famine. They are now cultivated chiefly as green fodder for cattle. The fitch is found wild in every country, from England to Bengal, and is very beautiful. In Judæa it was probably much cultivated as food for pigeons, who are extremely fond of it.—See *Scripture Herbal*, pp. 153, 154.

NIGELLA, OR BLACK SEED.

It is thought that the word rendered fitches in ISAIAH xxviii. 25, 27, should be rather the black seed of the Arabs, who strew the floor of the oven with it, and sprinkle it over the loaves. It is used by way of pepper in many Eastern countries.

FLAX.

EXODUS ix. 31.

“And the flax (was) smitten...(for it) was bolled” (risen in its stalk).

JOSHUA ii. 6.

“But she had brought them up to the roof of the house, and hid them with the stalks of flax, which she had laid in order upon the roof.”

PROVERBS xxxi. 13.

“She seeketh wool and flax, and worketh willingly with her hands.”

ISAIAH xix. 9.

“They that work in fine flax...shall be confounded.”

xlii. 3.

“The smoking flax shall he not quench.”

EZEK. xl. 3.

“There was a man...with a line of flax in his hand, and a measuring reed.”

[JUDGES xv. 14. HOSEA ii. 5, 9.]

Flax is not only a most useful, but a very pretty plant. From the stalks of it linen is manufactured. In Egypt the flax stalks are exposed to the sun to dry for some days after they are gathered, as was the custom of old. There are large manufactories of flax in our own dominions. The plant grows wild almost all over Europe. Its flower is blue, and from its seeds linseed oil is extracted ; the seeds boiled make the well-known linseed-tea, so good for coughs ; and they are also ground to be used in fomentations. The stalks are stringy, and fibrous, and form the material of linen, lawn, lace, thread, cambric, &c. After the stalks are gathered, they are drawn through a sort of comb, called a *heckle*, to strip them of their seeds and leaves. They are then soaked in water, to destroy the green pulp and the outer bark. Afterwards they are beaten, or else crushed with rollers, to separate the fibres from each other. After these are dried, they are drawn through a wire machine,

something like a large clothes-brush. This is in order to draw all the fibres one way, and to make them even and straight. Next, they are bleached, and at last handed over to the spinner.



FLAX.

The Hebrews made the wicks of their lamps of flax, and this explains the beautiful allusion, "He shall not quench the smoking flax." That is, though the flame be faint and feeble, sending forth, as it were, its expiring smoke, yet will not the merciful Redeemer put it out, but rather cherish and revive it.

FRANKINCENSE.

EXODUS xxx. 34.

"Take unto thee...pure frankincense."

CANTICLES iii. 6.

"Who is this that cometh out of the wilderness, like pillars of smoke, perfumed with myrrh and frankincense?"

MATT. ii. 11.

"And when they had opened their treasures, they presented unto him gifts; gold and frankincense, and myrrh." [LEVIT. ii. 1, 2.]



FRANKINCENSE.

This is a precious gum, dropping naturally from a tree which grows in India, or else flowing from wounds made in the bark of the tree. This last is the finer sort. It is exported from Bombay, and is burnt still as incense in the Hindoo temples.

GALBANUM.

EXODUS xxx. 34.

“Take unto thee...galbanum.”

This is a precious gum exuding from the stalks and branches of a foreign plant. Its smell, to our scent, is

most unpleasant, but the tastes of European and Eastern nations do not always agree on such matters ; and, it is also probable, that when mixed with other perfumes, and burnt, it may have been very effectual in subduing the most disagreeable odour which would otherwise have often arisen from the quantity of blood shed in the various Jewish sacrifices.

GHURKUD.

EXODUS xv. 25.

“And the Lord shewed him a tree, which, when he had cast into the waters, the waters were made sweet.”

It has been supposed by an eminent traveller that the ghurkud was the tree used by Moses. This must, of course, be most uncertain, as in the hand of God *any* tree would effect the purpose he designed ; but a description of the ghurkud, which abounds in the wilderness, will not be unsuitable.

“This is a low, bushy, thorny shrub, producing a small fruit, which ripens in June, not unlike the barberry. It seems to delight in a saline soil ; for we found it growing around all the brackish fountains which we fell in with. In the midst of parched deserts, where the heat was intense, and the fountains briny, the red berries of this plant often afforded us a grateful refreshment.” When in the valley of the Ghôr, the same writer observes, “The ghurkud was growing in abundance ; its red berries were now just ripe, sweetish, yet slightly acidulous to the taste, very juicy and pleasant, and quite refreshing to the heated traveller.”—ROBINSON’S *Researches*, vol. i. p. 96 ; ii. p. 494.

GRASS.

ISAIAH xl. 6, 7.

“All flesh is grass, and all the goodliness thereof is as the flower of the field : the grass withereth, the flower fadeth : because the Spirit of the Lord bloweth upon it : surely the people is grass.”

“The very affecting images of Scripture, which compare the short-lived existence of man to the decay of the vegetable creation, are scarcely understood in this country. The verdure is perpetual in England. It is difficult to discover a time when it can be said, *The grass withereth*. But let the traveller visit the beautiful plain of Smyrna, or any other part of the East, in the month of May, and revisit it towards the end of June, and he will perceive the force and beauty of these allusions. In May, an appearance of fresh verdure and of rich luxuriance everywhere meets the eye ; the face of Nature is adorned with a carpet of flowers and herbage, of the most elegant kind. But a month or six weeks subsequently, how changed is the entire scene ! The beauty is gone ; the grass is withered ; the flower is faded ; a brown and dusty desert has taken place of a delicious garden. It is, doubtless, to this rapid transformation of nature that the Scriptures compare the fate of man.”—HARTLEY'S *Researches*, pp. 214, 215.

BURNING GRASS.

PSALM lxxxiii. 14.

“As the fire burneth a wood, and as the flame setteth the mountains on fire.”

EZEKIEL xx. 47, 48.

“Say to the forest of the south, Hear the word of the Lord, Thus saith the Lord God, Behold, I will kindle a

fire in thee, and it shall devour every green tree in thee, and every dry tree ; the flaming flame shall not be quenched, and all faces from the south to the north shall be burnt therein. And all flesh shall see that I the Lord have kindled it, it shall not be quenched.”
[NAHUM i. 10.]

The Shangalla of Abyssinia live, during the first half of the year, “under the friendly shade of their own trees, the lower branches of which they bend downwards and fix into the ground, thus forming a verdant tent, which they cover on the outside with the skins of animals. Before the rainy season commences, they strike, or rather uncover their tents, leaving the boughs still pinioned to the earth, and thus bidding adieu to the skeleton of their deserted village, they seek refuge in caves which are rudely excavated in gritty, sandy rocks. As soon as the rains subside, the high grass which they have brought into existence becomes suddenly dry, brown, and parched ; and being inconvenient to the Shangalla, they set fire to it. Flame actually extends over the country, and fire actually flows down ravines and gullies, in which, but a few weeks before, another element was seen rushing on its course !”—BRUCE’S *Travels*.

“The waggons were in the midst of the fire before we perceived it ; and the smoke was so thick that it was impossible to see the length of the team. The oxen, being burnt in the feet, became unmanageable, and galloped off in great confusion, the dogs howled, and there was a general uproar. The smoke was suffocating ; the flames blazed up on each side of the waggons, which, to those especially that contained a quantity of gunpowder, was very alarming. The flames ran in all directions among the long dry grass and heathy plants with incredible celerity. The face of the country for several miles was a sheet of fire, and the air was obscured with a cloud of smoke. We had yet a considerable extent of country to pass among black ashes.”—BARROW’S *Travels*.



HEMLOCK.

HOSEA x. 4.

“They have spoken words, swearing falsely in making a covenant : thus judgment springeth up as hemlock in the furrows of the field.”

AMOS vi. 12.

“Ye have turned...the fruit of righteousness into hemlock.”

This poisonous plant resembles anise, and therefore in Hosea, the false swearer is said to cause judgment to spring up like hemlock in the furrows ; that is to say,

that false judgment is as mischievous, from its semblance to justice, as the poisonous hemlock is, by its resemblance to the wholesome plant, in the furrows of which it springs, and may deceive the husbandmen.

Hemlock was anciently used to poison criminals. The Jews gave it to deaden the pains of those who were condemned to be stoned, mixed with wine and myrrh. Hence the expression in Proverbs.

This practice of the Jews explains the relations of the Evangelists, who say that while Jesus was on the cross, they gave him vinegar mixed with gall, or wine mingled with myrrh. The word rendered *hemlock* in some parts of Scripture, is rendered gall in several others, and in all, a bitter weed is intended. The by-standers, we trust, in compassion, gave this mixture to the dying Saviour, thinking to soothe his agony. But he received it not, because he would bear all our bitter punishment unaided by such a draught, and pay the price of our redemption in his own agonizing pains, drinking the cup of wrath which we had merited, even unto the dregs.—See *Scripture Herbal*.

HYSSOP.

EXODUS xii. 22.

“And ye shall take a bunch of hyssop, and dip it in the blood that is in the bason, and strike the lintel and the two side-posts with the blood that is in the bason.”

1 KINGS iv. 33.

“And (Solomon) spake of trees, from the cedar-tree that is in Lebanon, even unto the hyssop that springeth out of the wall.”

PSALM li. 7.

“Purge me with hyssop, and I shall be clean !”

JOHN xix. 29.

“They filled a sponge with vinegar, and put it upon hyssop, and put it to his mouth.”

HEBREWS ix. 19.

“Moses took the blood of calves and of goats, with water, and scarlet wood, and hyssop, and sprinkled both the book and all the people.” [LEVIT. xiv. NUMBERS xix.]



HYSSOP.

The large and common sort of hyssop is probably that of Scripture. At a very early period a bunch of it was used in the temple, tied to a handle of cedar-wood by a cord of scarlet, for sprinkling the people with the water of purification. It may be that the hyssop, attached to its staff of cedar-wood, was what was offered to Jesus on the cross. His beloved disciple was at the very foot of the cross, and he saw the sponge put upon that hyssop, thenceforth the sign of purification to all mankind.

Hyssop was formerly much valued as a medicine in complaints of the chest, and coughs, and is still used by country people.—See *Scripture Herbal*, pp. 207—210.



JUNIPER.

JEREMIAH xlviii. 6.

“Flee! save your lives, and be like the heath (or juniper) in the wilderness.”

The word translated *heath* in our version, is most likely the *juniper*, a tree abounding in most of the deserts of Europe and Asia. The berries of this tree are used in medicine, and the spirit distilled over them is that well known as *gin*. The bushes are used for firing, and also for charcoal; and the smoke is much esteemed for imparting a fine flavour to dried meats. Robinson

observed many of the larger kind of juniper trees on the rocks about Wady Musa. They were ten or fifteen feet in height, and hung upon the rocks even to the summits of the cliffs.—*Researches*, vol. ii. p. 506.



LADANUM.—ROSE-FLOWERING CISTUS.

GENESIS xxxvii. 25.

“Behold a company of Ishmaelites came from Gilead, with their camels bearing spicery, and balm, and myrrh, (or ladanum) going to carry it down to Egypt.”

xliii. 11.

...“carry down the man a present, a little balm,... spices, and myrrh, (ladanum.)”

There is nothing in the plain of Sharon like what *we* call a rose ; but Mr. Wilde and other travellers imagine that the cistus, white or red, is intended ; and this beautiful plant grows abundantly in the plain, and in other parts of Judea. The flower of the cistus is most delicate and beautiful, and adorns our English gardens ; several kinds of it produce a sweet-scented gum, called ladanum, which is thought to be the drug intended in two passages of the book of Genesis, where the word is rendered myrrh. This gum was found sticking to the beards of goats, by the Arabs, who at length discovered that their charge had been feeding on the young branches of the cistus, and had procured the gum from them. After this the precious gum was obtained by passing leather whips over the shrubs, wounding, but not destroying them ; it was then allowed to dry on the whips, and afterwards carefully scraped off. It exudes most about sunrise. This gum is now used, mixed with frankincense, mace, and mint, as a strengthening plaster ; while the more liquid juice is employed to produce sleep, being, in fact, tincture of opium.

LENTILES.

GENESIS xxv. 34.

“Then Jacob gave Esau bread and pottage of lentiles,” (red pottage, verse 30.)

2 SAMUEL xxiii. 11.

“And the Philistines were gathered together into a troop, where was a piece of ground full of lentiles.”

[2 SAMUEL xvii. 28. EZEK. iv. 9.]

“We bought a supply of lentiles, or small beans, which are common in Egypt and Syria, the same from



which the pottage was made for which Esau sold his birthright. We found them very palatable, and could well conceive that to a weary hunter, faint with hunger, they might be quite a dainty.”—ROBINSON’S *Researches*, vol. i. p. 246.

“We breakfasted at a small encampment off a thick mess of lentiles and bread, highly seasoned with pepper, and very good.”—IRBY AND MANGLES, p. 275.

“The Barbary lentiles are boiled and stewed with oil and garlic, dissolving easily into a mass, and making a pottage of a chocolate colour.”—See SHAW’S *Barbary*.

Lentil plants are either rooted up, or cut down with the scythe, and are thrashed, winnowed, and cleaned, like corn.

LILY.

MATTHEW vi. 28, 29.

“And why take ye thought for raiment? Consider the lilies of the field, how they grow; they toil not, neither do they spin: and yet I say unto you that even Solomon in all his glory was not arrayed like one of these.”

“Our attention was particularly directed to the plant of which Burckhardt says, ‘The plain was covered with the wild artichoke; it bears a thorny, violet-coloured flower, in the shape of an artichoke, upon a stem five feet in height.’ It is very common in the Holy Land, particularly in the valley of Esdraelon, and was now in its fullest blow. The predominant colour of the flower is not violet, but blue. Mr. Smith was inclined to consider it the plant alluded to by our Lord when he said, ‘Consider the lilies of the field, how they grow; they toil not, neither do they spin: and yet I say unto you, that even Solomon in all his glory was not arrayed like one of these.’ The wild flowers of the country, which are remarkable for their exquisite beauty, however, are so numerous, that the species referred to by our Lord will probably never be identified.”—WILSON’S *Lands of the Bible*.

LOCUST, OR CAROB-TREE.

LUKE xv. 16.

“He would fain have filled his belly with the husks that the swine did eat.”

“The fruit of a species of locust-tree is here gathered. We rested under the shade of a beautiful large tree of this description, bearing a flower of a deep crimson

colour ; a yellow jessamine, with a delicious odour, was creeping around it.”—*Discoveries in Africa*.



“ At this place we had our choice of three large and spreading trees under which to breakfast,—a fig-tree, an oak, and a carob. This tree is common in Syria, Egypt, Greece, and all the southern parts of Europe, and sometimes growing very large. The tree produces slender pods, shaped like a horn or sickle, containing a sweetish pulp, and several small shining seeds. These pods are sometimes eight or ten inches long, and a finger broad. They are eaten with relish by the common people ; and are used extensively by them as an article of sustenance. We had them dry on board of our boat on the Nile in January ; steeped in water they afforded a pleasant drink.”—ROBINSON’S *Researches*, vol. iii. p. 58.

MALLOWS.

JOB xxx. 4.

“Who cut up mallows by the bushes.”

A traveller in 1600, when on his way towards Jerusalem from Aleppo in Syria, stopped at a village, and walking into the fields, “Saw many poor people gathering *mallows* and three-leaved grass, and asked them what they did with it; and they answered that it was all their food, and that they boiled it, and did eat it. Then we took pity on them, and gave them bread, which they received very joyfully, and blessed God that there was bread in the world, for they had not seen bread the space of many months.”

MANDRAKE.

GENESIS xxx. 14.

“Reuben went in the days of wheat-harvest, and found mandrakes in the field, and brought them unto his mother Leah.”

CANTICLES vii. 13.

“The mandrakes give a smell, and at our gates are all manner of pleasant fruits.”

The mandrake grows plentifully in Galilee. It has a long taper root, shaped like a parsnip, and almost of the same colour, but a little darker. This root runs three or four feet deep in the ground. This is often divided into two or three branches. Immediately from the crown of this root rises a circle of leaves, as in the lettuce, which, indeed, they greatly resemble, except in the colour, which is of a darker green. This tuft of leaves is at first erect, but when they attain their full growth, they spread open, and lie upon the ground.



They are more than a foot in length, and in the middle are four inches broad, growing narrow towards both ends. Among these come out the blossoms, which are of a purple colour in Palestine, but in this country of a greenish white. The fruit, when full grown, is not, in their country, larger than a nutmeg, of a yellowish-green colour when ripe, and full of pulp. Here the whole plant is reputed to be poisonous, and has a most unpleasant smell. In small doses, however, it has been used as an opiate. But in Palestine the *fruit* attains the size, and is of the colour of a small apple, ruddy, and of a most agreeable smell. It is valued as soothing, and inclining to sleep,—though when first taken it is exciting to the spirits. The most absurd stories used

to be told about the mandrake. It was said that the root resembled the human form, and that it uttered dreadful shrieks and groans when dug up,—so that the usual mode of procuring it was by tying a dog to the plant, whose struggles tore up the root, which, it was declared, immediately killed the dog with one of its shrieks. Many such like absurdities were related and firmly believed for centuries.—See *Pictorial History of Palestine*.

MANNA SHRUBS.

TAMARISK.—CAMEL'S THORN.

JOB xxx. 7.

“Under the nettles (camel's thorn) they were gathered together.” [ZEPHANIAH ii. 9.]

It is expressly said of the food called manna which supplied the wants of the Israelites, that it was from *heaven*. It was, therefore, a different thing from the substance now called manna by the Arabs, and which is obtained from the tamarisk and other shrubs, but in such small quantities that it never could have furnished a large company with food. It is, however, so curious a production, that it will not be out of place to mention it here, particularly as the Israelites in the desert where it is produced may often have partaken of it, as the Arabs still do, as a dainty. “In the month of June it drops from the thorns of the tamarisk upon the fallen twigs, leaves, and thorns, which always cover the ground beneath that tree in the natural state; the manna is collected before sunrise, when it is coagulated, but it dissolves as soon as the sun shines upon it. The Arabs clean away the leaves, dirt, &c., which adhere to it, boil it, strain it through a coarse piece of cloth, and put it into leathern skins; in this way they preserve it till the following year, and use

it as they do honey, to dip their bread into. The manna is found only in years when copious rains have fallen ; sometimes it is not produced at all. I obtained a small piece of last year's produce, at the convent ; where having been kept in the cool shade of that place, it had become quite solid, and formed a small cake ; it became soft when kept some time in the hand ; if placed in the sun for five minutes it dissolved ; but when restored to a cool place it became solid again in a quarter of an hour. Its colour is a dirty yellow ; its taste is agreeable, somewhat aromatic, and as sweet as honey. If eaten in any considerable quantity, it is said to be slightly purgative. The quantity of manna collected at present, even in seasons when the most copious rains fall, is very trifling. It is entirely consumed among the Bedouins, who consider it the greatest dainty their country affords. The tamarisk abounds more in juices than any other tree of the desert, for it retains its vigour when every vegetable production around it is withered, and never loses its verdure till it dies."—BURCKHARDT'S *Syria, &c.*, pp. 600, 601.

The manna of the tamarisk "is found in the form of shining drops on the twigs and branches, from which it exudes in consequence of the puncture of an insect...It has the appearance of gum."—ROBINSON'S *Researches*, vol. i. p. 170.

The manna which is sold as a medicine in our shops is obtained from various kinds of ash-trees. There is a sweet sugary substance (the work of an insect) obtained from a dwarf kind of oak. This is called honey-dew, dropping on cloths spread beneath the trees, in the form of large crystal drops of dew.

Rauwolf describes a plant, armed with sharp thorns, and called camel's thorn, (because it furnishes food for camels in the desert,) from which very fine manna may be obtained. He says it has few leaves, and pink flowers, and is an ell in height. *This* manna-shrub is thought to be intended in two passages of Scripture, where our version reads *nettle*, viz. in JOB xxx. 7, and ZEPHANIAH ii. 9.

MILLET.

EZEKIEL iv. 9.

“Take thou also unto thee...millet.”

This grain is much cultivated in Palestine. The plant has a long reed-like stalk, and long soft leaves. The grain is much used, both for human food and for poultry, and cattle are fond of the straw.

“Some tracts were sown with millet, now a few weeks above the ground, and yielding a delightful refreshment to the eye by its beautiful green.”—ROBINSON.

“The grain most in use amongst the people of all classes, and upon which also animals are fed, is a species of millet called *gussub*. This grain is produced in great

quantities, and with scarcely any trouble. The poorer people will eat it raw or parched in the sun, and be satisfied without any other nourishment for several days together. Bruised, and steeped in water, it forms the travelling-stock of all pilgrims and soldiers. When



cleared of the husk, pounded, and made into a light paste, in which melted fat is mixed, it forms a favourite dish."—*Discoveries in Africa.*



MINT.

LUKE xi. 42.

“Woe unto you, Pharisees ! for ye tithe mint and rue and all manner of herbs, and pass over judgment and the love of God : these ought ye to have done, and not to leave the other undone.”

Mint is so well known to us in England, that it needs no description ; for even the poor cottager has his little bundle of dried mint, the flavour of which, in soup, or with lamb, is so much liked also by the rich.

MULBERRY.

2 SAMUEL v. 22—24.

“ And the Philistines came up yet again, and spread themselves in the valley of Rephaim. And when David inquired of the Lord, he said, Thou shalt not go up ; but fetch a compass behind them, and come upon them over against the mulberry-trees. And let it be, when thou hearest the sound of a going in the tops of the mulberry-trees, that then thou shalt bestir thyself.”

LUKE xvii. 6.

“ If ye had faith as a grain of mustard-seed, ye might say unto this sycamine (purple mulberry) tree, Be thou plucked up by the root, and be thou planted in the sea ; and it should obey you.”

There are two sorts of mulberry, the white and the purple. The former is very inferior as a fruit to the purple ; but the tree of the white mulberry is the handsomest, though it is constantly disfigured by being cut, in order to produce more leaves for feeding the silkworms. There are numerous mulberry groves in Palestine, and some of them are very pretty. In the mountains, they are planted on terraces, but in the plains they are set in rows, and the trees are topped every year. The juice of the purple mulberry is mixed with water, and sweet violets, and makes a very pleasant drink, and the bark of the tree was used in medicine.

These trees are very long-lived, and grow very slowly. James the First of England tried to introduce the white mulberry into our country, in order that we might have silk of our own ; but he did not succeed in rearing them to perfection.

In the mulberry orchards the "trees are kept trimmed down very close, in order to make them put forth a greater quantity of leaves for the supply of the silk-worms ; but they thus come to have almost the character of dwarf trees, and contribute little to the beauty of the country, except by their verdure."—ROBINSON'S *Researches*, vol. iii. 431.

The country around Beirût is "covered with mulberry groves ; the culture of silk being here the chief employment of all the inhabitants."—*Ibid.* 435.

Travellers speak of passing through mulberry gardens *for miles*.

"The mulberry tree," says Dr. Bowring, "flourishes admirably on the coast, and through the more fertile parts of the Lebanon range. The arrangement generally made with the peasantry, is to allow them one-fourth of the silk for taking care of the worms, and reeling it off from the cocoons. The land-owner provides the leaves, which are gathered by the peasants. He also erects the sheds in which the cocoons are kept. They are simple barrache of reeds, without any roof, merely serving to shelter the worm from the inclemency of the weather, rain being little to be feared in the silk-worm season, and a covering is easily found in case of need. The power of producing silk is very great, and a little more attention to its cultivation would render it in a few years, the principal article of export ; articles of export being really the great desiderata for the extension of the Syrian trade."—*Report on Syria*, p. 14.

The same gentleman adds, "In Mount Lebanon almost every male inhabitant is a small proprietor of land. In the neighbourhood of Beyrout, there are also a great number of land-holders, who, for the most part,

cultivate the white mulberry tree. Large proprietors there are few, except among the emirs of Mount Lebanon, some of whom have extensive lands, which they either cultivate for their own account, or let out to farming tenants.”—*Report on Syria*, p. 102.



MUSTARD.

LUKE xiii. 19.

“It is like a grain of mustard-seed, which a man took and cast into his garden; and it grew, and waxed a great tree; and the fowls of the air lodged in the branches of it.”

The tree to which it is supposed our Lord here alluded, "is described as having a crooked, rough trunk, branching at eight or ten feet from the ground, and measuring a foot in diameter; the branches droop like a weeping willow, and have smooth, shiny leaves, with bunches of very minute flowers at the ends." The "seeds are very minute, with the strong pungent taste of cress. It is much valued for its medicinal qualities in the East, and these qualities curiously coincide with those of our own Durham mustard."—*Scripture Herbal*, pp. 289, 290, 291.

It is probably of this tree that Captains Irby and Mangles remark: "There was one curious tree which we observed in great plenty, and which bore a fruit in bunches, resembling in appearance the currant, with the colour of the plum; it has a pleasant though strong aromatic taste, exactly resembling mustard, and if taken in any quantity, produces a similar irritability in the nose and eyes to that which is caused by taking mustard. The leaves of this tree have the same pungent flavour as the fruit, though not so strong. We think it probable that this is the tree our Saviour alluded to in the parable of the mustard seed, and not the mustard plant which we have in the north; for although we met with the mustard plant growing wild, as high as our horses' heads, still, being an annual, it did not deserve the appellation of a tree; whereas, the other is really such, and birds might easily, and actually do take shelter under its shadow."—*Travels*, pp. 354, 355.

"In Upper Egypt, Lord Claud Hamilton saw a mustard tree higher than he could reach, and its stem as thick as his arm."—*Mission to the Jews*, p. 138.



MYRRH.

Exodus xxx. 23.

“Take thou also unto thee...of pure myrrh five hundred shekels.”

Esther ii. 12.

“...oil of myrrh.”

Psalm xlv. 8.

“Thy garments smell of myrrh.”

Canticles i. 13.

“A bundle of myrrh is my well-beloved unto me.”

MATTHEW ii. 11.

"They presented unto him gifts ; gold, and frankincense, and myrrh."

MARK xv. 23.

"And they gave him to drink wine mingled with myrrh ; but he received it not."

JOHN xix. 39.

"Nicodemus...brought a mixture of myrrh and aloes, about an hundred pound weight."

This gum, so highly valued by the ancients, is no longer in request as a perfume ; but its medicinal qualities are now better known. It is administered as a strengthening medicine with great success. A great deal of myrrh comes from Socotra and Abyssinia, especially from the country about the Straits of Babelmandel, and is conveyed by the Arab ships to Bombay or Calcutta ; whence it reaches Europe. But this drug is particularly dirty, and mixed with other gums, chiefly gum Arabic. The Arabian myrrh reaches Europe through Turkey, in not much better condition. The true myrrh tree has been found at Gison, on the borders of Arabia Felix. It is a small tree,—the wood yellowish white, the bark smooth, and of an ashen grey ; myrrh is gathered from the trunk. Myrrh was offered to our Blessed Lord when hanging on the cross, in accordance with the usual custom of giving wine and strong drink to those ready to perish, in order to render them insensible to their sufferings, "But he received it not."—See *Scripture Herbal*, pp. 292—295. [See LADANUM.]

MYRTLE.

NEHEMIAH viii. 15.

"Go forth unto the mount, and fetch...myrtle branches."

ISAIAH xli. 19.

“I will plant in the wilderness...the myrtle.”

lv. 13.

“Instead of the briar shall come up the myrtle-tree.”

[ZECHARIAH i. 8, 10, 11.]

This beautiful plant is very familiar to us. It rises in a favourable climate to be almost a tree, and adorns many a lowly cottage in Devonshire and the Isle of Wight. Its dark glossy leaves and sweet white flowers are seen on the hills near Jerusalem ; and in Italy the myrtle thickets are most lovely and fragrant. The bark and the root are employed in tanning the finer Russian leather, and the berries and flower-buds are eaten instead of pepper abroad.

NUTS.

GENESIS xliii. 11.

“Carry down the man a present...nuts, and almonds.”

CANTICLES vi. 11.

“I went down into the garden of nuts.”

The nuts sent by Jacob to Egypt were most probably the fruit of the pistachio nut-tree, which grows so plentifully, and the fruit of which is so much valued in Canaan. The nut is eaten both raw and parched ; and it makes a very nice cake when bruised and mixed with honey and a very little flour.

The bark of the tree is dark brown, and the leaves are of a darkish glossy green.

The nut alluded to in the Song of Solomon is the walnut. The pistachio is a stunted-looking tree, but the beautiful walnut groves of Syria and Palestine, are

spoken of with admiration by travellers. In the district of Lebanon the walnuts fetch a large price, and the oil obtained from them is used in dressing woollen-cloths and in making soap. The wood of the tree is smooth and prettily grained, and being light and tough, is valued for gun-stocks, and as much as forty pounds has been given for a tree for this purpose. In Circassia the tree is pierced in the spring, and a spigot is left for some time in the hole ; when this is withdrawn, a clear, sweet liquor flows out, considered by the Circassians a fine remedy for diseases of the lungs.”—See *Scripture Herbal*, pp. 308—312.

OAK.

GENESIS xxxv. 4.

“And Jacob hid (the strange gods) under the oak which was by Shechem.” [JOSH. xxxiv. 26.]

EZEKIEL xxvii. 6.

“Of the oaks of Bashan they have made thine oars.”

AMOS ii. 9.

“(I) destroyed the Amorite...(who) was strong as the oaks.”

[JUDGES vi. 11, 19 ; 2 SAM. xviii. 9, 10, 14 ; 1 KINGS xiii. 14 ; 1 CHRON. x. 12 ; ISA. i. 29, 30,—ii. 13,—vi. 13,—xliv. 14 ; EZEK. vi. 13 ; HOS. iv. 13 ; ZECH. xi. 2.]

OAK NEAR HEBRON.

“The venerable oak to which we now came is a splendid tree ; we hardly saw another like it in all Palestine, certainly not on this side of the plain of Esdraelon. The trunk of this tree measures twenty-two and a half feet around the lower part. It separates almost immediately

into three large boughs or trunks ; and one of these, again, higher up, into two. The branches extend from the trunk in one direction forty-nine feet ; their whole diameter in the same direction being eighty-nine feet. The tree is in a thrifty state, and the trunk sound. It stands alone in the midst of the field ; the ground beneath is covered with grass, and clean ; there is a well of water near by ; so that a more beautiful spot for recreation could hardly be found. This tree has often been described as a terebinth, but it is not one ; nor is there any large tree of that species near Hebron. Least of all can this be the tree of Abraham,—for his terebinth probably stood more towards Jerusalem, and had already disappeared in the days of Jerome. Here we found (a whole family) spending the day, and enjoying themselves beneath the wide-spreading shade of the noble tree.”—See ROBINSON’S *Researches*, vol. ii. p. 443.

SCARLET.

NUMBERS xix. 6.

“ And the priest shall take cedar-wood, and hyssop, and scarlet, and cast it into the midst of the burning.”

THE SCARLET OAK.

There is a kind of oak in Palestine infested by a small insect or worm, which sticks to the branches of the tree in the form of little red balls, about as large as a pea, from which the ancient dyers used to obtain a scarlet dye, as highly valued as the Egyptian blue, or the Tyrian purple. In two passages of Scripture, viz, in ISAI. i. 18, and LAM. iv. 5, this scarlet dye is alluded to, the Hebrew word meaning a worm, and particularly that kind of worm employed in preparing the ancient scarlet. This beautiful colour was to be used for the curtains of the inner tabernacle, and for covering the vessels of sacrifice in the journeys of the Israelites. (NUMB. iv. 8.) Cochineal has now taken the place of

this dye with modern dyers. The scarlet which was to be burnt, as directed in the book of Numbers, was probably the wood of the oak on which the scarlet grains were found.



OLIVE.

GENESIS viii. 11.

“And the dove came in to him in the evening ; and lo, in her mouth was an olive leaf, pluckt off.”

EXODUS xxvii. 20.

“Thou shalt command the children of Israel, that they bring thee pure oil-olive beaten for the light, to cause the lamp to burn always.”

I KINGS vi. 23.

“Within the oracle he made two cherubims of olive-tree, each ten cubits high.” [Verses 31—33.]

PSALM lii. 8.

“I am like a green olive-tree in the house of God.”

cxxviii. 3.

“Thy children like olive-plants round about thy table.”

ISAIAH xvii. 6.

“As the shaking of an olive-tree, two or three berries in the top of the uppermost bough, four or five in the outmost fruitful branches thereof, saith the Lord God of Israel.”

MICAHA vi. 15.

“Thou shalt tread the olives, but thou shalt not anoint thee with oil.”

[EXOD. xxiii. 11; DEUT. vi. 11,—viii. 8,—xxiv. 20,—xxviii. 40; JOSHUA xxiv. 13; JUDGES ix. 8, 9; 1 CHRON. xxvii. 28; JOB xv. 33; ISAI. xli. 19; JER. xi. 16; HOS. xiv. 6; ZECHARIAH iv. 11 12; ROM. xi. 17; REV. xi. 4.]

“The road lay through a wood of olive-trees. Every olive-tree here is worth from fifteen to twenty piastres. The soil in which the trees grow is regularly ploughed, but nothing is sown between the trees, as it is found that any other vegetation diminishes the quantity of olives. The ground round the stem is covered to the height of two or three feet with earth, to prevent the sun from hurting the roots, and to give it the full benefit of the rains.”—BURCKHARDT'S *Syria*, p. 172.

The olive is far more abundant than any other tree in Palestine, even in the present desolate state of the country. Almost every village has its olive-grove. The

wood of it is very excellent ; but its chief value consists in the oil produced by its fruit. There are two harvests



of this—one about August, the other about October. In the former, mats are spread beneath the trees, and the ripe fruit drops upon them ; in the latter, the tree is beaten. The purest oil was obtained by merely squeezing the fruit in the hand ; afterwards, the olives were trodden, or sometimes an oil-press was used. The fruit is also eaten in some countries preserved and pickled.

The olive-branch has ever been an emblem of peace, —and a little of its oil poured upon troubled water produces a calm ; hence, those who try by kind and gentle words to stop anger and contention, are said to “pour oil upon the wave.”

The olive-tree looks something like a gray willow from a distance ; and two or three stems generally rise from the same root. The branches are covered with gray bark, and the leaves are a lively green on the one side, and gray on the other.

Olive-trees live to an immense age. Pliny mentions an olive-yard, which was in full bearing in his time, having been planted seven hundred years before, and he speaks of one tree sixteen centuries old being shown by the Athenians.

“ We entered upon the grove of olives (near Gaza). There is something strongly indicative of health and vigour in the fresh look of a flourishing olive-tree, but especially when a grove of them is seen together, and the sun shining on their glossy leaves. The trunk is of a moderate height, and gnarled in a picturesque manner ; the foliage is of a deep and peculiar green, and under a passing breeze, the uppermost leaves turn round, and show a fine silvery hue...It is not merely the evergreen verdure of the tree that is referred to (in Scripture), but its health and vigour. Where could we find a better emblem of the Church in a flourishing condition than just such a grove of olives as this, with the peaceful notes of the turtle poured forth in the midst, and the sun’s living light over all, like the Sun of Righteousness shining over his peaceful Church !”—*Narrative of a Mission of Inquiry to the Jews*, pp. 105, 106.

The eight olive-trees in the garden of Gethsemane are “ very large and very old, but their branches are still strong and vigorous. One of them we measured, and found to be nearly eight yards in girth round the lower part of the trunk. Some of them are hollow with age, but filled up with earth, and most have heaps of stones gathered round their roots.”—*Ibid.*, p. 161.

“ An old olive-press was lying by the road-side (towards Saphet.) A wooden screw and vice seemed intended to press a large stone upon the olives, while a stone-trough beneath received the oil.”—*Ibid.*, p. 269.

“The sides, and even the summits (of these hills), were sprinkled over with vigorous olive-trees, showing how fertile and how suitable for the cultivation of the olive this range must have been in former days... We were now in the tribe of Asher; and the prophetic blessing pronounced upon Asher was, ‘Let him dip his foot in oil.’ His hills appear to be suitable neither for the vine nor for pasture, but for the olive, whose berries yield the finest oil. To this, also, as well as to Asher’s luxuriant plains in the south of his possession, the words of Jacob may refer ‘out of Asher his bread shall be fat.’”—*Narrative of a Mission of Inquiry to the Jews*, p. 265.

“In the Morea,” writes Mr. Hartley, “I had my attention directed to the practice of grafting the olive-trees, to which St. Paul alludes. My friend showed me a few wild olives; but by far the greater number are such as have been grafted. He informs me that it is the universal practice in Greece to graft from a good tree upon the wild olive.”

“Our encampment (just beyond the village of Safet) was under some enormous olive-trees, on the side of the hills... These great olives were worth being under. Their trunks and branches were as large as those of oaks in England.”—*Jewish Intelligence*.

ONYCHA, OR GUM-BENZOIN TREE.

EXODUS xxx. 34.

“Take unto thee onycha.”

“There seems little doubt that the fragrant vegetable gum thus called in Scripture, is the same with the one known by us under the name of ‘gum-benzoin.’ It is the most odoriferous of gums, and is a secretion from the



bark of a plant neither large nor showy. It is very useful in healing wounds, and is an important part of the well-known 'Friar's Balsam,' so commonly recommended in coughs."—See *Scripture Herbal*, pp. 348—350.

PALM.

EXODUS xv. 27.

"And they came to Elim, where were twelve wells of water, and threescore and ten palm-trees."

DEUT. xxxiv. 3.

"Jericho, the city of palm-trees."

PSALM xcii. 12.

“The righteous shall flourish like the palm-tree.”

CANTICLES vii. 7.

“Thy stature is like to a palm-tree.”

JEREMIAH x. 5.

“They (the idols) are upright as the palm-tree, but speak not.”

JOHN xii. 13.

“(They) took branches of palm-trees, and went forth to meet him, and cried Hosanna !”

REVELATION vii. 9.

“...A great multitude, which no man could number,...stood before the throne, and before the Lamb, clothed with white robes, and palms in their hands.”

[LEVIT. xxiii. 40 ; JUDG. iv. 5 ; NEH. viii. 15 ; EZEK. xl. xli.]

“When walking on the shore we noticed the *doum-tree*. It is the palm of Thebais, or Upper Egypt, but it differs from the common palm, being neither so large nor so high ; the body of the tree is smoother, the wood seems harder, and the tree often has several branches. The common palm-tree grows high, perpendicular, and without branches. The trunk of the tree does not increase from year to year in size, like other trees, but only rises higher. You see, therefore, in a grove of palms, the trees which are ten or twenty feet high, just as large as those from fifty to one hundred feet. The trunk of the tree is not solid, like other trees, but its centre is filled with pitch. In fact, the tree, when cut down, seems more like a bundle of straws, or splinters closely bound together, than like timber. The date is the fruit of the palm-tree. The fruit of the doum is

several times larger than the date, and totally different from it. Gibbon says 'The diligent natives celebrated, either in prose or verse, the three hundred and sixty



CLUSTER OF DATES.

uses to which the trunk, the branches, the leaves, the juice, and the fruit of the palm were skilfully applied.' We have not had occasion to make three hundred and sixty uses of it; but, besides eating of its fruit, and using the wood for fuel, we have slept under roofs made of its leaves, and on bedsteads made of its branches. It has served us for baskets, mats, brooms, ropes, cages for poultry, and walking-sticks. In crossing canals it has been our bridge, and we have eaten honey made (according to the account of the natives) from its sap. The palm is crowned at its top with a large tuft of spiring leaves about four feet long, which never fall off, but always continue in the same flourishing verdure."— *Memoirs of the Rev. Pliny Fisk*, pp. 226, 227.

We purchased some of "the spirit distilled from the date. We generally took a little before dinner as a tonic."—IRBY AND MANGLES, p. 69.

"I could not pass over without notice a palm-tree in its natural state, which we found in the



WILD PALM.

upper part of Wady Seleh. We always represent the trunk of a palm-tree shooting up to some distance, and then suffering its crooked branches to spring forth, which gracefully bear the dates, as brilliant as corals ; never thinking that all this elegance is the effect of art, and that Nature, less studied in her attitudes, attends

only to the preservation of the tree. The above wood-cut exhibits a palm, such as it may be found in a wild state, growing larger from year to year, making for itself a rampart of its decayed branches, and rising, as it were, perpetually from its own ruins. Neglected by the Arab of the desert, who considers every kind of cultivation as beneath his dignity, the palm sometimes forms impenetrable forests. More frequently, however, it is found in a solitary state, near a spring; thus presenting to the thirsty traveller a welcome signal, which assures him of water for refreshment, and of a friendly shade for repose."—LABORDE.

"The palms seemed frequently to spring up immediately out of the sand (of the desert), their root, no doubt, being nourished by *unseen moisture*. Does the Psalmist refer to this circumstance when he says, 'The righteous shall flourish as the palm-tree?' At all events there is reference to its regular, steady growth, year after year, marked by a new circle upon the bark. The beautiful waving of the branches also, when moved by a passing breeze, showed us how they came to be so frequently used in triumphs; a custom alluded to in Revelation, where the great multitude who have overcome all their enemies, and stand before the throne, are clothed in white robes, and hold palms in their hands."—*Narrative of a Mission of Inquiry to the Jews*, pp. 53, 54.

"Our tents were pitched in a palm-grove, the trees shading us during the day from the sunbeams, and at night from the easterly winds: the gentle moaning of the breeze through its slowly-waving branches was to us a most pleasing novelty."—*Discoveries in Africa*.

"The daughter of my friend sent me two very pretty straw fans for the flies; they were made of the date-leaf, in diamonds, coloured red, black, and yellow; the red is produced by madder root, the yellow with dried onion-leaves steeped in water, the black by indigo."—*Ibid.*

“The best dish was brought enclosed in a new basket of date-leaves, which I was desired to keep.”

“The women make baskets and drinking-bowls of palm-leaves with great neatness.”—DENHAM'S *Africa*.



PANNAG.

EZEKIEL xxvii. 17.

“They traded in thy market wheat...and Pannag.”

“Many different opinions exist as to *what* the pannag mentioned in Ezekiel really is ; but there seems good

ground for regarding it as the root of the panax-tree, called by the Chinese ginseng. This drug was highly valued by ancient physicians, and considered a cure for every disorder; in which light the Chinese still regard it. The ginseng, or panax of Asia, is a pleasant root to chew, and resembles the liquorice root, except that it is warmer and more pungent.”—See *Scripture Herbal*, pp. 371—374.

PINE.

NEHEMIAH viii. 15.

“Go forth unto the mount, and fetch...pine-branches.”

ISAIAH lx. 13.

“The glory of Lebanon shall come unto thee, the fir-tree, the pine-tree, and the box together, to beautify the place of my sanctuary.” [ISA. xli. 19.]

Ainsworth frequently mentions the beautiful pine-forests he met with in Asia Minor. They were very extensive, and some trees were upwards of a hundred feet high, and cut into timber one foot nine inches square.

“These fine trees seemed in their native element when shrouded with snow: their strong spreading branches bearing vast accumulations, that sometimes weighed them down to the ground; while others arose above these, fringing the mountain sides with a lace of leafy white, or climbed up the mountain heights, till lost in cloud or mist.”—*Travels*, vol. i. pp. 89, 129.

The wood of this tree is most useful; the oil or resin it contains preserves it from the attacks of insects, and beams, planks, &c., for ships and houses, and many parts of musical instruments are made of fir-wood. Rosin, pitch, tar, &c., come from this tree.

There is a most beautiful pine-forest in the neighbourhood of Beyrout. Pathways of soft sand pass through it in every direction, and the beautiful trees, shadow you on each side as you pass along. There is a round grassy carpet at the foot of each of the older trees, while the tender green of the young trees contrasts finely with the dark masses of the old. Now and then through the deep foliage you catch a glimpse of Mount Lebanon ; but all is so still that not a sound is heard but the murmur of the sea from afar, and the wind rustling among the branches.

PLANE-TREE.

GENESIS xxx. 37 ; EZEKIEL xxxi. 8.

It is thought that the plane-tree, and not the *chesnut*, is signified in these passages.

“This is a beautiful tree, flourishing best where well watered. Its timber is valuable, and extremely beautiful near the root, so that it is used for frames for prints, and other ornamental purposes. Its broad leaves cast a deep and delightful shadow, beneath which the Persian loves to spread his carpet ; and Pliny relates how a Roman consul, who governed a province in Asia, chose an old plane-tree for his bed-chamber and banqueting-room. The tree overhung a pure fountain, and its trunk was hollow with age, while its branches overshadowed the meadow ; and he liked to hear the rain dropping upon the leaves above, while he sat securely sheltered in the heart of the tree.”—See *Scripture Herbal*, pp. 389—392.

Ainsworth mentions “a noble plane-tree, which measured eight yards round its trunk, and was still more remarkable for its loftiness and symmetrical form, than even for its dimensions.”—*Travels in Asia Minor*, vol. i. p. 49.



PLANE TREE.

This tree derives its name from the fact of its bark peeling off naturally, and leaving the trunk naked.

PLANT OF RENOWN.

EZEKIEL xxxiv. 29.

“I will raise up for them a plant of renown.”

“Flocks and herds were seen spreading through the undulating valleys. In one place we saw many of them gathered together under a shady tree, waiting till the

excessive heat of noon should be abated. At other times the shepherds gather the flocks beside a well, as we afterwards saw at Lebonah, where many hundreds were lying down around the well's mouth... The sight of these flocks reclining beneath the shady trees suggested the true meaning of another passage, 'I will raise up for them a *plant of renown*.' This plant is some noble shady tree, where the flock may find rest and shelter,—a wide-spreading covert, renowned for its coolness, under whose protecting branches they shall feed, and be 'no more consumed with hunger.'... When shall Israel come to this plant of renown?"—*Mission to the Jews*, p. 109.



POMEGRANATE.

Exodus xxxix. 24, &c.

“And they made upon the hems of the robe pomegranates of blue, and purple, and scarlet, and twined linen.”

1 SAMUEL xiv. 2.

“And Saul tarried in the uttermost part of Gibeah, under a pomegranate tree.”

CANTICLES iv. 3, 13.

“Thy temples are like a piece of a pomegranate within thy locks. Thy plants are an orchard of pomegranates, with pleasant fruits.”

viii. 2.

“I would cause thee to drink of spiced wine of the juice of my pomegranate.” [1 KINGS vii. 18, &c.]

This is one of the most beautiful of trees. Its shape is spiry, and it has thick tufted foliage of vigorous green, each growing shoot shaded into tenderer verdure and bordered with crimson, and adorned with the loveliest flowers.

There is scarcely a part of the pomegranate that is not useful or agreeable to man. The seeds are dried, and employed as a valuable medicine; the fruit is delicious; and the rinds are preferred to almost any other substance for the tanning and preparing the finer kinds of leather, as the morocco, so much used for binding books, &c. The remarkable beauty of the pomegranate caused it to be copied as an ornament by the *wise in heart*, who built the ark of the covenant and the temple of Solomon.—See *Scripture Herbal*.

“The pomegranates were in full bloom,—the scarlet flowers shining brilliantly from among their deep green leaves.”—*Mission to the Jews*, p. 122.

 POPLAR.

GENESIS xxx. 37.

“Jacob took him rods of green poplar.”

HOSEA iv. 13.

“They...burn incense...under...poplars.”

The poplar abounds in Syria and Palestine. The constant rustling of their delicate leaves is very pleasant during the intense heats of summer, and the walks about Damascus are bordered with poplar trees, affording a delightful shade. The timber of this tree is useful for household utensils, and the dry leaves are eaten in winter by sheep. A gum that flows from the bark is considered a good remedy for headache, and the young buds are also used in medicine. In Greece, the poplar held a sacred character, and Israel is reproved for sacrificing under its shadow to heathen gods.

QUINCE.

PROVERBS xxv. 11 ; CANTICLES ii. 3, 5,—vii. 8,—viii. 5.
See *Citron*.

It is thought by some naturalists that the quince, and not the citron, is intended in these passages, in which the Hebrew word, though rendered apple in our version, is *Tappuach*, quince. Before the Israelites entered the promised land three places were named after it, — Tappuah, quince ; En-Tappuah, the fountain, or spring-head of the quince ; and Beth-Tappuah, the well of the quince.

The quince of the East far surpasses the harsh quince of our orchards. Of those found in Arabia Felix, a traveller writes that they were not rough like ours, but rather to be compared with apples. The quince is not only valued as a fruit, but medicines are prepared from it.—See *Scripture Herbal*.

REEDS, RUSHES, FLAGS, &c.

Exodus ii. 3.

“And when she could not longer hide him, she took for him an ark of bulrushes, and daubed it with slime and with pitch, and put the child therein ; and she laid it in the flags by the river’s brink.”

1 KINGS xiv. 15.

“The Lord shall smite Israel as a reed is shaken in the water.”

2 KINGS xviii. 21.

“Thou trustest upon the staff of this bruised reed, even upon Egypt, on which if a man lean, it will go into his hand, and pierce it : so is Pharaoh King of Egypt unto all that trust on him.”

JOB viii. 11.

“Can the rush grow without the mire ? Can the flag grow without water.”

ISAIAH ix. 14.

“Therefore the Lord will cut off from Israel head and tail, branch and rush, in one day,” (*i.e.*, all things living on land and in water.)

xviii. 1, 2.

“Woe to the land...that sendeth ambassadors by the sea, even in vessels of bulrushes upon the waters.”

xix. 6, 7.

“They shall turn the rivers far away, and the brooks of defence shall be emptied and dried up, the reeds and flags shall wither. The paper-reeds by the brooks, by the mouth of the brooks, and every thing sown by the brooks, shall wither, be driven away, and be no more.”

xxxv. 7.

“In the habitation of dragons, where each lay, shall be grass, with reeds and rushes.”

ISAIAH xlii. 3.

“A bruised reed shall he not break.”

JEREMIAH li. 31, 32.

“One post shall run to meet another, and one messenger to meet another, to shew the king of Babylon that his city is taken at one end, and that the passages are stopped, and the reeds they have burned with fire, and the men of war are affrighted.”

EZEKIEL xl. 3.

“There was a man, ... with a line of flax in his hand, and a measuring reed.” [xlii. 16—19; xlv. 1.]

JONAH ii. 7.

“The depth closed me round about, the weeds were wrapped about my head.”

MATTHEW xi. 7.

“What went ye out into the wilderness to see?—a reed shaken with the wind?”

xxvii. 29.

“And when they had platted a crown of thorns, they put it upon his head, and a reed in his right hand; and they bowed the knee before him, and mocked him, saying, Hail! king of the Jews!”

MARK xv. 19, 36.

“They smote him on the head with a reed...and one ran, and filled a sponge full of vinegar, and put it on a reed, and gave him to drink.”

3 JOHN 13, 14.

“I will not with ink and pen write unto thee, but I trust I shall shortly see thee.”

REVELATION xxi. 15.

“And he that talked with me had a golden reed to measure the city, and the gates thereof, and the wall thereof.” [xi. 1.]

There are many different kinds of reeds and rushes. Hasselquist describes two sorts which grow near the river Nile. Of *one of these sorts* the Egyptians make ropes, using for this purpose the narrow smooth leaves of the plant, which is about eleven feet high, and has scarcely any branches. In fishing, also, they find this reed useful, making floats of it. The *other sort* is a small reed, only two or three feet high, full-branched, and with short sharp leaves, lancet-shaped ; this reed would seem at first almost useless—and yet the very soil of Egypt is owing to it, for it has thick roots, which creep and mat themselves together for a considerable distance, and these matted roots have stopped the earth which floated in the waters, and formed a habitable country out of the sea.

The roots of the *bulrush* in Holland are found to bind the clay of which the dykes and mounds are formed that defend that country from the ocean ; and public officers are appointed, to plant and watch over this valuable rush.

The reed translated *bulrush* in the history of the infant Moses, should be rendered *papyrus*, or paper-reed. Of this reed small vessels were often constructed by the Egyptians, and its fibres were used for cordage.

Another most important use made of *this reed* was as a material for writing. “The trunk of this plant is composed of several coatings, lying one on the other, which are taken off with a needle : they are afterwards spread on a table, so much of which is moistened as is equal to the size which it is intended the leaves of papyrus shall be of. This first bed of leaves is covered with a layer of fine paste, or with the muddy water of the Nile warmed ; then a second bed of paper leaves is laid upon this paste, and the whole is left to dry in the sun. Such was the Egyptian papyrus, whence our paper takes its name, though the composition be so very different.”

Rice-paper is made of the pith of a rush which grows in the Ganges.



PAPYRUS.

All kinds of reeds and rushes were employed for the purpose for which Jochebed selected the papyrus. The daubing with slime was necessary to render the little vessel waterproof.

Rushes like our own grow in some parts of Palestine. Rush-mats and rush-lights were used by the ancients as by ourselves. In England the floors of all apartments, even in palaces, were strewn with rushes, instead of covered with carpets, not more than two centuries ago.

The *sugar-cane* was a favourite reed, on account of its sweet cool juice. In many places now persons carry about pieces of sugar-cane ready peeled, which they sell to the passers-by, who chew it as they walk along. Dr. Robinson observes,—

“Another plant, which formerly was cultivated in abundance in the plains of Jericho, has also disappeared; I mean, the sugar-cane. The historians of the Crusades inform us, that the earliest Crusaders found large tracts of these canes growing on the coast of the Mediterranean around Tripolis, and as far south as Tyre; yielding a substance called *zucra* (sugar), then unknown in Western Europe; and on whose juice the warriors often refreshed themselves under their many sufferings and privations. According to Jacob de Vitry, the canes were also cultivated very extensively on the plains of the Jordan around Jericho; where the many hermits of that region partly lived upon them, regarding the juice as the wild honey of John the Baptist.”—ROBINSON’S *Researches*, vol. ii. p. 294.

There is *another sort of reed* which furnishes capital arrows and fishing-rods. *This reed* is light and straight, and of some length. When Jeremiah foretold the fall of Babylon, he describes the enemy as burning the reeds with fire. The city of Babylon was surrounded by low marshy ground, and defended by canals cut from the river Euphrates, so that the reeds which grew in those places could not have been burnt unless the enemy had dried up the water-passages, and so secured an easy entrance. This circumstance, then, would prove the hopeless condition of the city.

Some reeds are used for writing in the East, and, indeed, were used universally for this purpose, until in the third century quill-pens began to be employed. The best writing-reeds come from a little town near the now desert Babylon.

Mr. Wilson mentions some pens “made of hard canes or reeds, the size of swan quills, and exceedingly

clumsy. They are cut and split in the same manner as common pens, except that the nib is larger, and, of course, no proper hair-stroke can be drawn with them, and the letters made are as indistinct as if they had been formed by a splinter of wood.”—RAE WILSON, vol. ii. p. 30.

Some reed pens, however, prepared from the smaller and more perfect stems, are not bad instruments in a skilful hand,—for the finest Eastern manuscripts have been executed with them. The outer skin of these reeds is allowed to harden till it can bear being cut to an extremely fine point. It is of the larger and coarser kind that Mr. Wilson speaks above.

“We passed many small islands...covered with reeds, amongst which were the papyrus, bamboos, and very tall grasses.”—*Discoveries in Africa*.

“The people were busily floating their goods over the river, on rafts made of bundles of reeds; but, there being too few in number to transport our luggage, it was necessary to make new rafts for ourselves. We therefore pitched our tents, and one man was sent by each of the Arab merchants to cut long reeds, which are readily made into rafts by lashing bundles of them across two long poles.”—*Ibid*.

The prophet Jonah exclaims, “The weeds were wrapped about my head.” The common weed of the coast where Jonah was, and which abounds in many other parts, has leaves like thin ribands, which are eaten by swine and other animals when thrown on shore, and are used in Holland as manure. In some places mattresses are stuffed with them, and the Florence flasks are covered with them, twisted round like rushes. These water-weeds are perhaps *the flags* of Scripture.

“Some have thought the plant translated ‘leek,’ in Numbers xi. 5, to be the *lotus*; and Lowth so renders the word which in our version of Isaiah xix. 6, is called ‘flags.’ The *lotus* is an aquatic plant peculiar to Egypt, —a kind of water-lily. The Egyptians during the heats

of summer eat the whole stalk raw, with the upper parts : they are watery, proper to moisten and refresh. Herodotus says, ‘The Egyptians who inhabit the marshy grounds, to procure themselves more easily the means of sustenance, make use of the following expedient : when the waters have risen to their extremest height, and all their fields are overflowed, there appears above the surface an immense quantity of plants of the lily species, which the Egyptians call the lotus ; these having cut down, they dry in the sun. The seed of the flower, which resembles that of the poppy, they make into a kind of bread, and bake ; they also eat the root of this plant, which is round, of an agreeable flavour, and about the size of an apple. There is a second species of the lotus which grows in the Nile : the root of which is very grateful either fresh or dried.”

M. Sonnini describes the lotus as a water-lily, with white and odoriferous flowers. This forms one of the most common aliments of the Egyptians now, as we learn from history it did those of ancient times. Its roots form a tubercle, which is gathered when the waters of the Nile subside, and is boiled and eaten like potatoes. This *lotus* has frequently been mistaken for a totally different plant, which the ancients also called *lotus*, and which furnished the principal nourishment of certain nations of Africa, who, on that account, were called ‘lotophagi.’ This latter bears no relation to the *lotus* which grows in Egypt ; but is a shrub which grows in several parts of Barbary.

“Scarcely any of those reeds, for which the Nile was once famous, are now to be found upon its banks. The *lotus* particularly has disappeared, so that it is nearly unknown ; and the *papyrus* is very rare. Now, the words of Isaiah are these : ‘The waters shall fail from the sea, and the river shall be wasted and dried up.’ This has literally taken place. In the days of the prophet there were seven mouths of the Nile ; there are now only two ; the rest have been wasted and dried up.

But farther he predicts, ‘They shall turn the rivers (*i.e.* the canals) far away, and the brooks of defence shall be emptied and dried up: the reeds and flags shall wither. The paper-reeds by the brooks, by the mouth of the brooks, and every thing sown by the brooks, shall wither, be driven away, and be no more.’ These words have come to pass, while at the same time it is interesting to remark, that Egypt is as famous for its melons and cucumbers, its leeks, and onions, and garlic, as it was in the days of Moses. The reeds were commanded to wither, and they have fled away; the other productions, against which no word of threatening went forth, have been left luxuriant as before. The shelving banks of the river, down which Pharaoh’s daughter went with her maidens to bathe, have been much elevated, owing to the vast deposits of alluvial soil which the Nile is making every day.”—*Narrative of a Mission of Inquiry to the Jews*, pp. 52, 53.

RETEM.

1 KINGS xix. 4, 5.

“But he himself went a day’s journey into the wilderness, and came and sat down under a juniper-tree...And ...he lay and slept under a juniper-tree.”

JOB xxx. 4.

“Who cut up juniper-roots for their meat...” (or, gather the roots *for fuel*.)

PSALM cxx. 4.

“Coals of juniper.”

“Among the many plants we noticed were the retem, a species of the broom-plant, with small, whitish, variegated blossoms, growing in the water-courses and valleys. This is the largest and most conspicuous shrub of

these deserts. Our Arabs always selected the place of encampment (if possible) in a spot where it grew, in order to be sheltered by it at night from the wind ; and during the day, when they often went on in advance of the camels, we found them not unfrequently sitting or sleeping under a bush of retem, to protect them from the sun. It was in this very desert, a day's journey from Beersheba, that the prophet Elijah lay down and slept beneath the same shrub. This is the plant mentioned in 1 Kings xix. 4, 5. The Hebrew name *Rothem* is the same as the present Arabic name. Our version wrongly translates it *Juniper*. The roots of the retem are very bitter, and are regarded by the Arabs as yielding the best charcoal."—See ROBINSON'S *Researches*, vol. i. pp. 123, 124, 299.

"The valley in which we rested had some beautiful and large specimens of the white broom or retem. It was under such a bush that Elijah, when he had gone a day's journey into the wilderness, came and sat down, and requested for himself that he might die, and under which he lay and slept. Job speaks of its roots affording food in the time of want and famine. It deserves to be noticed, that Rithmah, one of the stations of the Israelites in the desert, (Num. xxxiii. 18,) means the '*place of the broom*.' At this time we spoke four '*ships of the desert*,' bound for Cairo, and loaded with '*coals of juniper*,' or, in other words, with charcoal made from the roots or branches of the *retem*, or white broom of the desert, the identical bush referred to by the sacred writer."—WILSON'S *Lands of the Bible*.

RUE.

LUKE xi. 42.

"Woe unto you, Pharisees ; for ye tithe mint, and rue, and all manner of herbs, and pass over judgment and the love of God."



The taste and smell of this herb are strong and coarse ; but it was once valued in medicine, and was thought to dispel infection, and even now it is strewed about the dock where criminals are placed during trial in our justice-halls, for this purpose, in case of the prisoners bringing contagion from their cells.

Hasselquist saw rue growing on Mount Tabor.



SAFFRON.

[CANTICLES iv. 14.

“Spikenard and saffron.”

We must all be acquainted with the pretty spring flower called the crocus. From this flower the medicine and dye called saffron is produced. There is a kind common in Syria, much valued for its sweet perfume,

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and to which Solomon probably alludes. There are many gardens of crocuses about Aleppo, and great quantities are brought to England from the Mediterranean coast for the use of the dyer. For the same purpose a good deal is grown in the county of Suffolk. From one kind of saffron a beautiful rose-colour is produced, and also a red paint, called Spanish vermilion. In Egypt women and children go out at sunrise to gather the flower, and spread its delicate leaves out upon mats, in the shade, for a whole day, after which they are reduced to a paste in a mortar, and made into flat, round cakes.

It is the *blue* crocus from which English saffron is obtained. The part to which this name is given is the stigma, or little knob-like heads which rise up upon small yellow threads in the middle of the flower, and which are dried, and called saffron.

The colour of dried saffron is a sort of orange, tinged with red ; but when put into water, it gives to the latter a fine clear yellow hue.

Some of our English crocuses are blue, some a golden yellow, and some are beautifully striped. They close at night, and even in the day if the sun does not shine. There is a pretty little poem on the flower, with which we may close this account of it.

“O pleasant is the hopeful hour,
 When from her lowly bed,
 We mark the crocus, early flower,
 Uprear her golden head.
 We deem the weary winter past,
 When from her darksome tomb,
 The merry crocus bursts at last
 In her perennial bloom !
 The bulb that slumber'd in the ground
 Hath felt a quickening change,
 And wakes, with bright apparel crown'd,
 As beautiful as strange.
 E'en thus the spirits of the just,
 In glorious forms shall rise ;
 When Christ shall summon from the dust
 His chosen to the skies ! ”

SHITTIM, ACACIA, OR GUM-ARABIC TREE.

EXODUS xxv. 10, 23.

“And they shall make an ark of shittim wood...Thou shalt also make a table of shittim wood.”

xxvi. 37.

“Make...five pillars of shittim wood, and overlay them with gold.”

xxvii. 1.

“Thou shalt make an altar of shittim wood.”

NUMBERS xxxiii. 49.

“Abel-Shittim, in the plains of Moab.”

ISAIAH xli. 19.

“I will plant in the wilderness...the shittah-tree.”

This tree is of the middle size ; the young branches are armed with twin thorns, and the flowers are like little golden balls, hanging gracefully among the leaves, and giving a sweet smell. The valuable gum called gum-arabic exudes from the bark. This tree is found in Egypt, around Mount Sinai, and in the neighbourhood of the Dead Sea ; also in India ; and its leaves often furnish food for camels when little else is to be obtained.

The wood is considered incorruptible, and so hard and close-grained as to take an excellent polish. For these reasons, and from its being close at hand, it was selected as a peculiarly fit material for the ark in the wilderness.—See *Scripture Herbal*, pp. 440, 441.

“One of our crew brought us some fine pieces of gum-arabic which he picked off the acacia ; some of the specimens were remarkably clear and large.”—IRBY AND MANGLES, p. 18.

Robinson mentions a species of very thorny acacia near Sinai, producing a little gum-arabic of an inferior quality, which the Arabs sometimes gather and sell, when not too lazy.—*Researches*, vol. i. pp. 109, 110.

“The acacia trees of the valley were thickly covered with gum-arabic. The Arabs often bring to Cairo loads of it, which they collect in these mountains. I found it of a somewhat sweet and rather agreeable taste. The Bedouins pretend that upon journeys it is a preventive of thirst, and that the person who chews it may pass a whole day without feeling any inconvenience from the want of water.”

“The pods which they produce, together with the tenderest shoots of the branches, serve as fodder to the camels; the bark of the tree is used by the Arabs to tan leather.”

“We met with a few families of Arabs, who had chosen this place that their camels might feed upon the thorny branches of the gum-arabic tree, of which they are extremely fond. These poor people had no tents with them; and their only shelter from the burning rays of the sun, and the heavy dews of night, were the scanty branches of the (acacia) trees. The ground was covered with the large thorns of these trees, which are a great annoyance to the Bedouin and their cattle. Each Bedouin carries in his girdle a pair of small pincers, to extract the thorns from his feet, for they have no shoes, and use only a sort of sandal made of a piece of camel's skin, tied on with leathern thongs. In the summer they collect the gum-arabic, which they sell at Cairo, for about twelve or thirteen shillings per hundred-weight. My companions eat up all the small pieces that had been left upon the trees by the roadside. I found it to be quite tasteless; but I was assured that it was very nutritive.”—BURCKHARDT'S *Syria, &c.*, pp. 446, 479, 533.

“The banks were skirted by a thicket of the thorn-tree, a species of acacia, but not that which produces the gum-arabic....Armed from the summit down to the

ground with enormous double thorns, pointing in every direction, 'like quills upon the fretful porcupine,' it makes an impenetrable thicket to most animals except the rhinoceros, whose hide, though not proof against a musket-ball, as has been asserted by a great naturalist, has little to fear from the spines of the mimosa. The bark, being powerfully astringent, is preferred to that of any other tree in the colony for preparing leather from raw skins ; and the wood, being hard and tough, is used for waggon-poles, and as lock-shoes for the wheels. The trunk of the tree gives out great quantities of a clear transparent gum, which, however, does not seem to have been applied to any kind of use. It is remarkable that almost every tree which furnishes tasteless gums or resins is covered with a bark that is highly astringent and austere to the taste."—BARROW'S *Travels*.



SOAP, OR HERB OF THE WASHERS.

JEREMIAH ii. 22.

"Though thou...take thee much soap, yet thine iniquity is marked before thee, saith the Lord."

MALACHI iii. 2.

"But who may abide the day of his coming? and who shall stand when He appeareth? For he is like a refiner's fire, and like fuller's soap."



"These herbs abound in Arabia ; where the various tribes gather and burn them for the sake of the ashes, which they sell in the cities of Syria for the purpose of making soap and glass. From time immemorial soap has been made in large quantities in Syria and Palestine, and forms a main article of the trading exports. Russell

and others mention the profusion of ashes brought into the cities by the Arabs of the Desert; and the moors about Joppa furnish a quantity of an inferior kind from



the burning of the heath which covers them. The vegetable oils which are procured from the olives, nuts, and seeds which abound in Syria, are very valuable in the soap manufacture. Most of the soap used in Greece and Egypt is the produce of Palestine.”—See *Scripture Herbal*, pp. 442—445.

Robinson mentions meeting with a plant near Sinai, “from which the Arabs obtain a substitute for soap, by pounding it when dry between stones, and mixing it with the water in which they wash their linen.”—*Researches*, vol. i. p. 124.

We occasionally met with “an herb, with a smooth, shining, reddish stalk, and small glass-like leaves, the ashes of which are called (alkali) from their peculiar

alkaline properties." — ROBINSON'S *Researches*, vol. ii. p. 211.

"*Salsola Kali Húbûba of the Arabs*.—This plant grows in immense quantities around the shores of the Dead Sea, especially the southern extremity. It is burned by the Arabs for kelp, as in the north of Scotland. The ashes are used in the manufacture of soap. It is also called kalli by the Arabs, from which our word kali, or alkali, is derived."—*Jewish Intelligence*.

"A species of salsola or salt-wort, grew here in great abundance, with very minute fleshy leaves surrounding the woody branches. It is known to the country people by the Hottentot name of *Canna*, and is that plant from the ashes of which almost all the soap that is used in the colony is made. These ashes, when carefully burnt and collected, are a pure white caustic alkali, a solution of which, mixed up with the oily fat of the large broad tails of the sheep of the colony, and boiled slowly for five or six days, takes the consistency and the quality of an excellent white soap. This salsola grows in such abundance in Southern Africa, that, supposing the plant, after being cut down and burnt, to be reproduced in five years, the quantity of soda, or barilla, that might annually be made from the ashes would be sufficient, beside serving the colony, for the whole consumption of Great Britain."—BARROW'S *Africa*.

SPIKENARD.

CANTICLES i. 12.

"While the king sitteth at his table, my spikenard sendeth forth the smell thereof."

JOHN xii. 3.

"Then took Mary a pound of ointment of spikenard, very costly, and anointed the feet of Jesus, and wiped

his feet with her hair, and the house was filled with the odour of the ointment.” [MARK xiv. 3.]

This plant is produced in the most remote and hilly parts of India, and is very difficult to procure, many inferior drugs being sold under its name. The part which is dried, and produces the perfume, resembles ermines' tails, or locks of hair, and is sold in the Indian bazaars under a name which signifies a lock of hair. When alive, it is said to rise from the ground like ears of green wheat. In Nubia, Ethiopia, and Arabia, the spikenard is used as a perfume, and in medicine, but is always mixed with other fragrant substances, the scent and power of which it is thought to increase. These precious ointments were kept by the ancients in boxes of alabaster, or onyx; and one of these it was that the pious woman in the gospel brought to Jesus' feet.

An ointment in which there is spikenard is now used in Upper Egypt and in Abyssinia, to anoint the face, and preserve the skin from the effects of the burning sun.*

STACTE.

EXODUS xxx. 34.

“And the Lord said unto Moses, Take unto thee sweet spices, stacte and onycha,” &c.

This was really only a finer kind of myrrh. It was the spontaneous exudation from the tree producing myrrh, whereas that drug was procured by making

* For an excellent article on spikenard, see *Scripture Herbal*, from whence the above is gathered.



incisions in the bark. It was accounted very precious, and was used, even in preference to frankincense, on the altars of some of the Pagan gods.—See *Scripture Herbal*, pp. 463, 464.

STORAX.

GENESIS xxxvii. 25; xliii. 11.

“A company of Ishmeelites came from Gilead, with their camels bearing spicery,” &c.

It is supposed by some that the drug called “storax” is here meant by “spicery” and “spices.”

The tree which produces it is small, has a smooth bark, and deep green leaves, lined with white down. The flowers are white, and the general appearance of the little tree is very pretty. It grows abundantly in Syria, Palestine, Greece, &c. The resinous gummy substance is obtained by cutting the branches. It is of a reddish colour, and very pleasant smell, and is serviceable as a remedy for asthma, cough, &c.



SYCAMORE.

1 KINGS x. 27.

“And the king made silver to be in Jerusalem as stones, and cedars made he to be as the sycamore-trees that are in the vale, for abundance.”

1 CHRONICLES xxvii. 28.

“The sycamore-trees that were in the low plains.”

PSALM lxxviii. 47.

“He destroyed...their sycamore-trees with frost”
(great hailstones).

AMOS vii. 14.

“I was...a gatherer (rather a *scraper*) of sycamore fruit.”

LUKE xix. 4.

“And he ran before, and climbed up into a sycamore-tree to see him.” [ISAIAH ix. 10.]



SYCAMORE FIG.

The sycamine, or sycamore, is one of the common timber-trees not only of Egypt, but also of the Holy Land. The mummy chests, the sacred boxes, the models

of ships, and a variety of other curiosities found in the catacombs (of Egypt) are all of them made out of this wood. And farther, as the grain and texture of it are remarkably coarse and spongy, it could not, therefore, stand in the least competition with the *cedar* for beauty and ornament. The sycamore buds very late in the spring ; and from having a larger and more extensive root than most other trees, it is alluded to as the most difficult to be *plucked up*.”—SHAW’S *Barbary*, vol. ii. p. 315.

“The sycamore-tree here is a different tree from that which (erroneously) bears the name with us. The wood is valuable, being hard, and very durable. It is a low tree, with a thick body, and many branches, shaped a little like the apple-tree, the leaf large. It bears a fruit which is to some extent valuable...It would seem that much of it was used, and the gathering of it a business.”—PAXTON’S *Letters*, p. 8.

The sycamore, called also *Pharaoh’s fig*, sometimes grows to an immense size. The leaves are of a glossy green. The fruit is very abundant, and, though not so well flavoured as the garden-fig, it is much liked by the poor Egyptians, who feed much upon it. It is rubbed or scraped with iron combs, or rakes, which wound the skin of the figs, and admit into them a small black fly, which, it is said, hastens the ripening of the fruit.

TARE.

MATTHEW xiii. 25.

“While men slept, his enemy came and sowed tares among the wheat.”

“The following incident tends, I think, to explain a parable of our Lord in Matt. xiii :—

“The wife of religious ministers is styled in Greece Mrs. Priestess. On one occasion I observed Mrs. Priestess and her children, during my stay in their house, appear very much indisposed, and inquired the reason. ‘Sir,’ said she, ‘we have eaten some *zizania*.’ This is the word translated *tares* in the Gospel of St. Matthew. They had unwittingly eaten this deleterious grain as genuine corn, and I observed that headache and sickness were the result.

“This *zizania* is considered to be the plant called *darnel*, well known to the people of Aleppo. It grows among corn : the reapers do not separate the plant, but, after threshing, they reject the seeds by means of a fan or sieve. So in the parable the plant is described as growing among corn : the reapers do not separate it,—both grow together until the harvest. According to Johnson, darnel is the first of hurtful weeds. Its leaves resemble these of wheat or barley, but spring up rougher. The grains having scarcely any husk, are easily scattered among the corn where it grows.”—REV. S. S. WILSON’S *Travels*.

TEREBINTH, OR TURPENTINE TREE.

This tree is not expressly mentioned in our version of the Scriptures : but it is supposed that in several places where the *oak* is there named, the *terebinth* is the tree intended, as in GENESIS xviii. 4, JOSH. xxiv. 26, JUDGES vi. 11, &c.

Robinson mentions a fine specimen of this tree :—“The largest we saw anywhere in Palestine, spreading its boughs far and wide like a noble oak. This species is, without doubt, the *terebinth* of the Old Testament ; and under the shade of such a tree Abraham might well have pitched his tent at Mamre. It is not an evergreen,

as is often represented ; but its small, feathered, lancet-shaped leaves fall in the autumn, and are renewed in the spring. The flowers are small, and followed by small oval berries, hanging in clusters from two to five inches long, resembling much the clusters of the vine when the



grapes are just set. From incisions in the trunk there is said to flow a sort of transparent balsam, constituting a very pure and fine species of turpentine, with an agreeable odour and a mild taste, and hardening gradually into a transparent gum. This is usually adulterated, and is now seldom found in the shops. In Palestine nothing seems to be known of this product of the turpentine-tree."—*Researches*, vol. iii. p. 15.

THORNS, THISTLES, BRIERS, &c.

GENESIS iii. 18.

"Thorns also, and thistles shall it bring forth to thee."

JUDGES viii. 7.

"I will tear your flesh with the thorns of the wilderness, and with briers."

PROVERBS xv. 19.

"The way of the slothful man is as an hedge of thorns, but the way of the righteous is made plain" (raised as a causeway). [MIC. vii. 4.]

ECCLESIASTES vii. 6.

"As the crackling of thorns under a pot, so is the laughter of the fool." [PS. lviii. 9 ; ISAI. xxxiii. 12.]

ISAIAH lv. 13.

"Instead of the thorn shall come up the fir-tree, and instead of the brier shall come up the myrtle-tree."

EZEKIEL xxviii. 24.

"And there shall be no more a pricking brier unto the house of Israel, nor any grieving thorn of all that are round about them, that despised them, and they shall know that I am the Lord."

HOSEA x. 8.

"The thorn and the thistle shall come up on their altars." [ISAI. xxxiv. 13.]

MATTHEW xiii. 7.

"And some fell among thorns, and the thorns sprung up, and choked them."

xxvii. 29.

"And when they had platted a crown of thorns, they put it upon his head."

2 CORINTHIANS xii. 7.

“There was given to me a thorn in the flesh.”

HEBREWS vi. 8.

“That which beareth thorns and briars is rejected, and is nigh unto cursing, whose end is to be burned.”

[2 KINGS xiv. 9.]

There is a thorny plant growing plentifully in the East, which is very probably that from which the crown of thorns, worn by our blessed Saviour, was procured. Hasselquist says, “This plant is very fit for the purpose, for it has many small and sharp spines, which are well adapted to give pain: the crown might be easily made of these soft, round, and pliant branches; and, what in my opinion seems to be the greater proof is, that the leaves very much resemble those of ivy, as they are of a very deep glossy green.” Perhaps the enemies of Christ would have a plant somewhat resembling that with which emperors and generals were crowned, in cruel mockery of *the King of the Jews*, when for our sakes he poured out his soul unto death. One kind of this tree, an evergreen, called by the Arabs Nūbk, or Nebek (lotus-tree),* forms a strong, thorny hedge all around the modern Jericho, and is “an almost impenetrable barrier.” It bears a small acid fruit, something like a crab-apple, highly prized by the Egyptians in particular, and a great favourite with the Bedouins, who grind the dried fruit together with the stone, and preserve the meal in leathern skins. It is an excellent provision for journeying in the desert, for it requires only the addition of butter-milk to make a most nourishing, agreeable, and refreshing diet.—ROBINSON, BURCKHARDT.

“We gathered several specimens of the *Spina Christi* (thorn of Christ). This plant, called *Nabka* by the

* See Reeds, &c. p. 253.

Arabs, grows abundantly on the hills of Jerusalem. The branches are very pliable, so as easily to be platted into a crown, while the thorns are very many, and sharp, and about an inch in length."—*Mission to the Jews*, p. 90.

There is another thorn of the same species, called *Buckthorn*, which is also plentiful in Palestine, and which some suppose furnished the crown of thorns. Its slender branches are armed with straight spines, set by pairs at each joint. It has small yellow flowers, and a pleasant fruit, as large as the sloe.

The *Box-thorn* is a graceful plant; but its prickles are of the most stinging sharpness.

One kind of *Mad-apple* is the thorn mentioned in the Book of Proverbs, and by the prophet Micah.

The *sweet-brier*, so well known in our English hedges, grows also in Palestine.

It was an ancient custom to make rods or scourges of briars and thorns, which tore the flesh. To this King Rehoboam alludes, when he said, "My father hath chastised you with whips; but I will chastise you with scorpions," that is, rods made of briars.

Though the flower of the sweet-brier is pretty, it has no smell; neither is the fruit good for food. From these circumstances, and from the troublesome nature of the brier, which cannot easily be got rid of when once it has fixed its trailing root in the ground, it is often mentioned with something of contempt in Scripture.

There is one kind of thorn so troublesome, and so difficult to root out of the ground, that it is called the *Rest Harrow*,—for neither that nor the plough have much effect upon it. It is so common in Egypt and Palestine, that many people imagine it is the thorn particularly intended in the curse of God on the ground for man's disobedience.

The *Butchers' Broom*, or skewer-wood, is so called because the wood never becomes rough when rubbed either way, neither does it splinter; and all the butchers'

skewers are made with it. It is very common in Devonshire, and is a very pretty shrub. It is thought that the word *atad*, in GEN. i. 10, means this shrub, which is sometimes called the knee-holly.

The *sloe*, or *black-thorn*, is translated *thickets* in the Book of Samuel, and *thistles* in other places. It is a very common thorn in Judæa.

“Four hours together this day we travelled through fields of weeds, briers, and thorns, such as we never saw anywhere else. Sometimes the weeds were as plentiful, and stronger than the barley amongst which they grew. Often there was nothing but weeds. In ploughing, they plough round about them, and in reaping they take care not to cut down the giant thistles. The variety of thistles was very great. We counted ten or eleven different species in the course of the afternoon. There were also large fields covered with the *hellah*, or sesamine, like ‘hemlock in the furrows of the field.’ Through the whole of the plain the ground is chapped and cracked as if by an earthquake, and to the foot feels hard as iron. All these things appear, without contradiction, to be a literal fulfilment of the word of God. ‘Upon the land of my people shall come up thorns and briers,—until the Spirit be poured upon us from on high. The rivers of waters are dried up, and the fire hath devoured the pastures of the wilderness. The heaven that is over thy head shall be brass, and the earth that is under thee shall be iron.’* ”

“We felt the same in traversing the vast plain of Esdraelon, the greater part of which is covered over with almost impenetrable thickets of weeds, thorns, briers, and thistles. Some time after, when sailing up the Bosphorus, conversing with a gentleman whom we had met in Palestine, who appeared to be a man of the world, we asked him if he had climbed Mount Tabor, to obtain the delightful view from its summit. His answer was, ‘No : why should I climb Mount Tabor, to see a coun-

* Deut. xxviii. 23 ; Joel i. 20.

try of thorns?’ He was thus an unintentional witness to the truth of God’s word. ‘Briers and thorns’ include all kinds of *thorny growth*, whether the common brier, or the thorn, or the thistle. The two latter are specially appropriate in a land under the curse.”

The hills of Judah all bear the remains “of ancient terraces, though not a vine is trained upon them....Dr. Keith, observing one of the adjoining hills to be very verdant, and not very steep, set out with the purpose of climbing it. After a short absence, however, he returned to tell us that he had failed in his attempt. He found the surface overgrown with strong briars and thorns, through which he tried to make his way; but without success. We felt a secret joy in beholding the deserted terraces and fields overrun with thorns; for, when we saw the word of *threatening* so clearly fulfilled, our unbelief was reproofed, and we were taught to expect without a shadow of doubt, that the *promised blessing* would be as full and sure.”—*Narrative of a Mission to the Jews*, pp. 117, 119, 120.

“We were very much struck, as on the days before, at passing over miles and miles of richest plain, without finding village, or inhabitant, or cultivation,—the land left to itself. Thistles we saw ten and twelve feet high, and the plains looked as if covered with crops of rye and yellow wheat, while, in reality, they were covered with rank, luxuriant grasses, even taller than wheat, ripened by the sun, and rustling and waving in the breeze.”—*Jewish Intelligence*.

There is a passage in the *Scripture Herbal*, with which we may well close this chapter. “It is enough for solemn consideration, that the thorn formed part of the original curse wherewith the earth was cursed for the sake of Adam’s disobedience; and that he who redeemed us from the consequences of Adam’s sin wore on his brow a crown of thorns, when he bowed his head, and pronounced that the great work of salvation was FINISHED.”

TIEL-TREE.

ISAIAH vi. 13.

“As a tiel-tree, and as an oak, whose substance is in them when they cast their leaves.”

This tree is better known to us as the lime or linden-tree. The blossom affords a fine pasture for bees, and in some parts of Europe an infusion of the flowers is used as a cure for headache. The timber is much valued; it is very durable, and furnishes the material of which the Portuguese make the clogs always worn by them in wet weather. The bark furnishes sacking, cordage, &c., and garden-mats are wove from the soft inner part of it, and imported from Russia, where they are used for clothing and bedding in vessels. Strips of these mats, sometimes called bass-mats, are the common article used by gardeners for tying up flowers and plants.

WHEAT.

GENESIS xli. 22.

“And I saw in my dream, and behold, seven ears came up in one stalk, full and good.”

“A man brought some wheat to parch, and to our surprise we observed the ears of an unusual size, one of them exceeding in dimensions two of the ordinary sort, and on one stalk. Mr. Legh procured some, which he brought to England. It has succeeded very well. It is



HESHBON WHEAT.

a bearded wheat. The annexed drawing is from nature, though the plant was unavoidably gathered too early to convey a correct idea of its size when at maturity.”—IRBY AND MANGLES, p. 472.

VINE.

GENESIS ix. 20, 21.

“Noah planted a vineyard, and he drank of the wine.”

xlix. 11, 22.

“Binding his foal unto the vine, and his ass’s colt unto the choice vine ; he washed his garments in wine, and his clothes in the blood of grapes...Joseph is a fruitful bough, even a fruitful bough by a well ; whose branches run over the wall.”

LEVITICUS xix. 10.

“And thou shalt not glean thy vineyard, neither shalt thou gather every grape of thy vineyard : thou shalt leave them for the poor and stranger : I am the Lord your God.”

NUMBERS xiii. 20, 23, 24.

“Now the time was the time of the first ripe grapes, ...and they came unto the brook of Eshcol, and cut down from thence a branch with one cluster of grapes, and they bare it between two upon a staff...The place was called the brook (valley) Eshcol, (*i.e.*, a cluster of grapes,) because of the cluster of grapes which the children of Israel cut down from thence.”

DEUTERONOMY xxxii. 14.

“...The pure blood of the grape.”

PSALM lxxx. 8, 10, 13.

“Thou hast brought a vine out of Egypt, thou hast cast out the heathen, and planted it.....the hills were covered with the shadow of it.....The boar out of the wood doth waste it, and the wild beast of the field doth devour it.”

cxxviii. 3.

“Thy wife shall be as a fruitful vine by the sides of thine house...”

SONG OF SOLOMON ii. 15.

“Take us the foxes, the little foxes, that spoil the vines, for our vines have tender grapes.”

ISAIAH v. 1.

“My well-beloved hath a vineyard in a very fruitful hill”..... (read to verse 7.)

xvi. 10.

“In the vineyard there shall be no singing, neither shall there be shouting : the treaders shall tread out no wine in their presses ; I have made their vintage-shouting to cease.”

JEREMIAH vi. 9.

“They shall thoroughly glean the remnant of Israel as a vine ; turn back thine hand as a grape-gatherer into the baskets.”

MICAH iv. 4.

“They shall sit every man under his vine and under his fig-tree.” [1 KINGS iv. 25 ; ZECH. iii. 10.]

MATTHEW xx. 1.

“The kingdom of heaven is like unto a man that is an householder, which went out early in the morning to hire labourers into his vineyard.” (See whole parable.)

xxi. 33.

“There was a certain householder, which planted a vineyard, and hedged it round about, and digged a winepress in it, and built a tower, and let it out to husbandmen.”

xxvi. 29.

“I will not drink henceforth of this fruit of the vine, until that day when I drink it new with you in my Father’s kingdom.”

JOHN xv. 1.

“I am the true vine, and my Father is the husbandman.” (See whole parable.)

REVELATION xix. 15.

“He treadeth the wine-press of the fierceness and wrath of Almighty God.” [xiv. 18—20 ; DEUT. xxiii. 24 ; xxiv. 21 ; ISA. lxiii. 2, 3 ; JER. ii. 21 ; HOSEA x. 1 ; JOEL iii. 18 ; AMOS ix. 13.]

VINES AND VINEYARDS.

There is no one set of images more frequently employed in Scripture, to signify various conditions of prosperity or adversity, or to typify spiritual blessings, than those derived from the vine, and its mode of cultivation in the East.

A time of peace and tranquillity is represented by “every man’s dwelling safely under *his vine*, and under his fig-tree ;” plenty and prosperity are typified by the “mountains dropping down sweet wine.” The temporal blessedness of Judah is figured by his “binding his foal unto the vine, and his ass’s colt unto the choice vine ; he washed his garments in wine, and his clothes in the blood of grapes ; his eyes shall be red with wine, and his teeth white with milk.”

The chosen people of Jehovah are styled “a noble vine,” and “the vineyard of the Lord of Hosts.” Under this latter title of a vineyard both the Jewish and Gentile churches are signified, and with the time of the vintage are associated “singing and shouting,” the tokens of gladness. Our blessed Saviour makes choice of the emblem of a vine, and its fruitful branches, to represent his own person, and his union with believers. “I am the *true* vine, ye are the branches ; herein is my Father glorified, that ye bear much fruit.”

On the other hand, when reprov'd for their sins and spiritual barrenness, the chosen people are called, “an empty vine,” “the degenerate plant of a strange vine,” bringing forth only “wild grapes.” In the beautiful lamentation for Moab, in Isaiah xvi., the *vine* of Sibmah

is said to languish ; “and gladness is taken away, and joy out of the plentiful field ; and in the vineyards there shall be no singing, neither shall there be shouting : the treaders shall tread out no wine in their presses ; I have made their vintage-shouting to cease.” While the terrible judgments of the Messiah upon impenitent sinners are figured in these awful words, “I have trodden the wine-press alone ; and of the people there was none with me ; for I will tread them in mine anger, and trample them in my fury.”

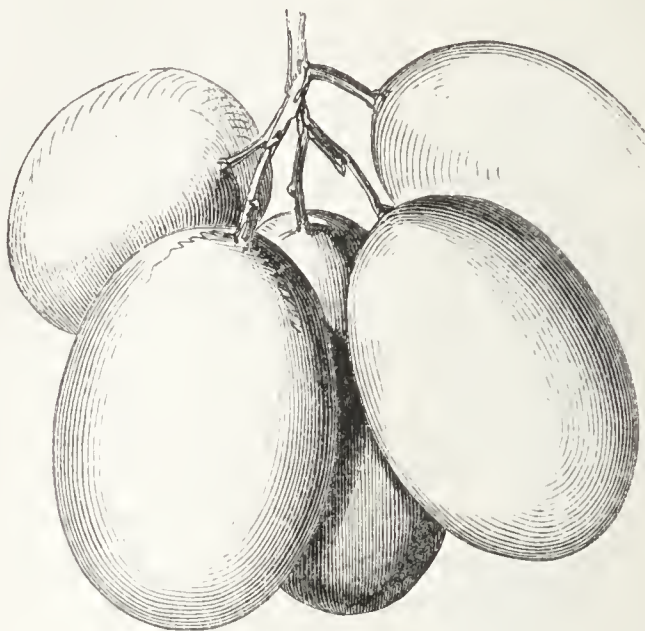
So abundant were the vines in Palestine, and so much did they constitute the riches of the people, that it was requisite to have express laws made respecting the conduct of the inhabitants with regard to the vineyards.

Thus, persons who were passing might enter another man’s vineyard and eat, but might not carry away any of his grapes : and when these had been gathered, what fell, or was left behind on the vine, was to belong to the “stranger, the fatherless, and the widow.”

The vines of Palestine are still peculiarly fine, bearing grapes of an extraordinary size. An Italian traveller (Dandini) says that the grapes of Mount Libanus are as large as prunes, and Doubdan writes that in the country about Bethlehem, he found a most delightful valley, full not only of aromatic herbs and rose-bushes, but planted with vines, which he supposed were of the choicest kind ; and that it was indeed the valley of Eshcol, whence the spies carried that prodigious bunch of grapes to Moses, of which we read in the book of Numbers. “It is true,” says this traveller, “I have seen no such bunches of grapes, not having been here in the vintage, but the monks assured me that they still find here some that weigh ten or twelve pounds.”

Laborde, speaking of the vines of Idumea, writes, “The vines of this country, of the fruit of which we saw some specimens, account for the enormous grapes which the spies sent out by Moses, brought back from the places they had visited.”—*Travels*, pp. 203, 304.

Mr. Jowett speaks of passing "some well-cultivated vineyards near Jerusalem, the produce of which furnishes that city with excellent wines. Along the sides of these



IDUMEAN GRAPES.

hills, also, we continually see flocks and herds : the sheep and goats in the immediate vicinity of the city have a very picturesque appearance, as they are slowly driven into Jerusalem just before sunset, after which the gates are shut ; and from their milk a great part of the support of the inhabitants is derived. Thus, when this seemingly unpromising soil was cultivated in perfection, it would answer exactly to the promise given to the tribe of Judah, 'Binding his foal unto the vine, and his ass's colt unto the choice vine ; he washed his garments in wine, and his clothes in the blood of grapes ; his eyes shall be red with wine, and his teeth white with milk.'"
—JOWETT'S *Researches*, pp. 259, 260.

"The vineyards produce different kinds of grapes, which are white, black, and red. To the juice of the last frequent references are made in the Scriptures ; and, with striking propriety, an inspired writer calls it, the

pure *blood* of the grape.”—RAE WILSON’S *Travels*, vol. i. p. 237.

The wines of Lebanon are still celebrated. Le’ Bruyn speaks of their being the finest in the world, so that we can understand why the prophet Hosea should have derived a comparison from them, when he says, (ch. xiv. 7,) “The scent thereof,” rather, the “*memorial*,” as it is rendered in the margin, “shall be as the *wine of Lebanon*.”

Sweet wines are those most esteemed in the East, being more full and rich, and capable of being kept,* and these were anciently appropriated to the use of monarchs and persons of rank. “Royal wine in abundance, according to the state of the king,”† which words, by the ancient Eastern translators of the Septuagint, are rendered “much and *sweet* wines, such as the king himself drank.” It is probable that the word translated *new* wine, in Joel iii. 18, and in Acts ii. 13, should be *sweet*, or full, rich, strong wine.

“This fact may explain the conduct of the military who attended the crucifixion of the Lord of Glory, as it was perhaps in derision of his claim to royal authority that they offered him vinegar, or wine in a state of strong acidity, instead of good or generous wine.”—RAE WILSON’S *Travels*, vol. i. p. 237.

The leaves first appear on the vine about the beginning of March. The grape ripens towards the latter end of July; and when surrounded with Arabs, Judæa, through fear of them, became obliged to hurry on the vintage; but the wine made in this manner could not be *sweet* wine. The grapes hanging long on the trees makes the wine much richer and sweeter; and thus Amos writes, “Behold, the days come, saith the Lord, that the ploughman shall overtake the reaper, and the treader of grapes him that soweth seed; and the mountains shall drop sweet wine, and all the hills shall melt;” that is, the days shall come when the grapes shall not be gathered, as they were wont before to be, in

* Luke v. 39.

† Esther i. 7.

a state of immaturity, for fear of Arabs, or other destroying nations ; but they shall be suffered to hang even till the time of ploughing, so perfect shall be the security of those times.

We find that in a province of Egypt which is surrounded with Arabs, who frequently make excursions into it, especially in the season in which fruits, which it produces in great abundance, begin to ripen, the inhabitants are obliged to gather them unripe, and send them to Cairo ; and the wine of that province has in consequence degenerated, though once remarkable for its excellence. This adds fresh force to the promise, that the time of treading grapes should be delayed till they should be in such perfection that “the mountains should drop *sweet wine*.”

“The vintage of Aleppo* lasts from the 15th of September to the same day of November, and nothing is more common there than this running of the vintage and sowing-season into one, the latter beginning towards the close of October, and lasting all November ; and thus the treader of grapes would continually overtake, or meet, with him that soweth seed.”—HARMER’S *Observations*, vol. iii. pp. 211—214.

The grapes were *trodden* with the feet to make the wine. Dr. Chandler thus describes the beginning of the vintage he saw in Greece. “The black grapes (were) spread on the ground in beds, exposed to the sun to dry for raisins : while, in another part, the juice was expressed for wine ; a man, with feet and legs bare, treading the fruit in a kind of cistern, with a hole or vent near the bottom, and a vessel beneath it to receive the liquor.”

The tame cattle are very fond of vine-leaves, and are permitted to eat them in the autumn ; for about Smyrna Dr. Chandler remarked that the leaves were stripped by

* The vegetable productions of Judæa and Aleppo are nearly contemporary.

the camels and herds of goats, who are admitted to browse after the vintage. This explains why Moses, by a direct law, forbade a man's causing another's vineyard to be eaten, by putting in his beast.*—*Ibid*, pp. 281, 282.

The fox of Palestine is a great destroyer of grapes, as of old.†—RAE WILSON.

“In our own country the vine is suffered to expand itself to any size, and nailed in regular lines to the wall, or to the frame of a greenhouse; thus a single tree will produce several hundred-weight of grapes. On the banks of the Rhine the growth is limited to three feet in height, and each tree is supported in an upright position. In France it is formed into arches and ornamental alcoves. In Sardinia it assumes the aspect of a parasitical plant, luxuriating among the branches of the largest forest-trees, and clasping with its tendrils the extreme twigs. In Asia Minor its wild festoons hang their green and purple pendants from rural bowers of trellis-work. On the heights of Lebanon it lies in a state of humiliation, covering the ground like the cucumber, and subsequently we saw it in the valley of Eshcol, in a position different from all that have been named. There three vines, planted close together, and cut off at the height of five feet in the apex of a cone formed by their stems, where, being tied, each is supported by two others, and thus enabled to sustain the prodigious clusters for which that region has always been famous; clusters so large, that, to carry one the spies of Moses were compelled to place it on a stick borne by two men. Each mode is doubtless the best that could be adopted in the quarter where it prevails, considering the nature of the soil and climate, the value of the land, and the object of the cultivation.”—ELLIOT'S *Travels*.

“The vineyards in Persia are generally enclosed by high walls. The Persian vine-dressers do all in their power to make the vine run up the wall, and curl over

* Exodus xxii. 5.

† Cant. ii. 15.

on the other side, which they do by tying stones to the extremity of the tendril. May not this illustrate that beautiful image, 'Joseph is a fruitful bough,' &c. The vine, particularly in Turkey and Greece, is frequently made to entwine on trellises, around a *well*, where, in the heat of the day, whole families collect themselves, and sit under the shade."—MORIER'S *Second Journey through Persia*, &c., p. 232.

"It is very common," writes Dr. Russell, "to cover the stairs leading to the upper apartments of the harem with the *vines*. And they have often a lattice-work of wood raised against the dead *walls*, (see prayer-book version of Psalm cxxviii. 3,) for a vine or other shrub to crawl upon."

"The wine-presses in Persia are formed by making (digging) hollow places in the ground, lined with mason's work."—HARMER'S *Observations*, vol. ii. p. 152.

"Rhamdoon is surrounded with vineyards. The vines are, for the most part, allowed to lie on the ground. In a few places peculiarly situated they are trained on supports, which raise them several feet above it. The grapes are of various kinds, most of them white and large. We are supplied with them most generously and munificently by the people. There are several houses that seem to be common property, where they express the juice of the grape. They have along one side of the house a row of large vats, into which the grapes are thrown; and beside these, stone-troughs, into which the juice flows. Men get into the vats, and tread the grapes with their feet. It is hard work, and their clothes are often stained with the grape. The figures found in Scripture, taken from this, are true to the life. 'I have trodden the wine-press alone...I will stain all my raiment...the wine-press was trodden without the city.'"

"The grape grows well here (Bru-manah), and there are some fine vineyards. The grape that abounds most, as far as I have observed, is a large white grape. The single grape is often nearly as large as a partridge's egg.

The branches contain a noble collection of these grapes, and more than once the large size of the bunch has made me think of the cluster which the spies took from Eshcol as a sample of the fruit of the land.

“Frequently the rocky terraces are entirely concealed by the verdant vines which hang over them, and often we passed through rows of vines, where the road was covered from view by the spreading luxuriance of the branches. To such a fruitful and spreading vineyard, where the very roads were overspread by luxuriant boughs, Job referred, when he said of the wicked’s final ruin, ‘He beholdeth not the way of the vineyards.’”—PAXTON’S *Letters*.

“Grapes and melons are used as food by all classes in Persia. The vine is set out in rows. The space—about fifteen feet wide—between the rows is sown two years with cotton. The third year—that in which it begins to bear—the soil is thrown up into ridges about $3\frac{1}{2}$ feet high. The vines stand usually in the north side of the ridge, that they may be partially shielded from the concentrated heat of the sun. They run over, and the clusters lie on the top and the opposite side. Near the high mud-walls, by which many of the vineyards are enclosed, for the security of the fruit, the vines often run up and over the wall, and afford striking illustrations of the Scripture allusions. The growth of each year is cut off, early in the ensuing spring, very near the point where it sprang from the permanent stock. Vine-dressers tell us, that the twentieth of an inch being left by the pruner will ensure a future crop. It is thus pruned ‘that it may bring forth more fruit.’ Grapes are eaten fresh in their season. They are also braided by their stems, and suspended from the ceilings of dry rooms, and kept fresh during the winter. They are dried as raisins, for sale and exportation, as well as for domestic use. Vast quantities are also made into molasses. And still more—generally of the inferior grapes and the gleanings—are made into wine and arrák.”—PERKINS’ *Persia*, pp. 427, 428.

“We could not observe more nearly the peculiar manner of training the vines. They are planted singly in rows, eight or ten feet apart in each direction. The stock is suffered to grow up large to the height of six or eight feet, and is then fastened in a sloping position to a strong stake, and the shoots suffered to grow and extend from one plant to another, forming a line of festoons. Sometimes two rows are made to slant towards each other, and thus form by their shoots a sort of arch. These shoots are pruned away in autumn.”—ROBINSON’S *Researches*, vol. ii. p. 442.

“I noticed the manner in which the vine is *cut or purged*. Only two or three of the principal sprouts are permitted to grow up from the root; the rest are cut off; and this practice is often called by the Greeks ‘*cleaning*.’ It may be added that the word translated *severity*, in Romans xi. 22, properly denotes *excision, cutting off*, as the gardener cuts off with a pruning-knife dead boughs or luxuriant stems.”—HARTLEY’S *Researches*, &c., p. 314.

The ride to Hebron is “through vineyards of the most rich and fertile description, each one having a tower in the midst for the keeper of the vineyard. We were told that bunches of grapes from these vineyards sometimes weigh six pounds; every grape of which weighs six or seven drams. Sir Moses Montefiore mentioned that he got here a bunch of grapes about a yard in length. Such a bunch the spies carried on a staff betwixt two.”—*Mission to the Jews*, p. 184.

“The region around Hebron abounds with vineyards, and the grapes are the finest in Palestine. Each vineyard has a small house or tower of stone, which serves for a keeper’s lodge; and during the vintage we were told that the inhabitants of Hebron go out and dwell in these houses, and the town is almost deserted.”—ROBINSON’S *Researches*, vol. i. p. 314.

“There was a vineyard on our right, and they immediately brought us most beautiful grapes, green and pur-

ple, fresh gathered, and covered with bloom; the purple ones in close bunches of great size, and the grapes as large as small plums.....At daybreak they brought us fresh grapes, cold as ice, from the vineyard, and exceedingly beautiful in appearance."

"We entered the fruitful valley of Eshcol, which we found highly cultivated, and the vines in luxurious growth, most of them standing from five to six feet in height. The husbandmen were busily engaged, digging round and purging them, and many a withered branch lay on our way-side. May we all be found abiding in the true vine!"—*Jewish Intelligence*, July, 1847.

"At a village near Cæsarea, Shulze and his party took supper under a large vine, the stem of which was nearly a foot and a half in diameter, the height about thirty feet, and covered with its branches and shoots (for the shoots must be supported,) a hut of more than fifty feet long and broad. The bunches of the grapes were so large as to weigh ten or twelve pounds, and might be compared to our plums."

"In our own country, a bunch of *Syrian* grapes was produced at Welbeck, and sent as a present from the Duke of Portland to the Marquis of Rockingham, which weighed nineteen pounds. It was conveyed to its destination—more than twenty miles distant,—on a staff by four labourers, two of whom bore it in rotation; thus affording a striking illustration of the proceeding of 'the spies.' The greatest diameter of this cluster was nineteen inches and a half: its circumference four feet and a half; and its length nearly twenty-three inches."

WILD VINE.

ISAIAH v. 2, 4.

"He looked that it should bring forth grapes, and it brought forth wild grapes."

JEREMIAH ii. 21.

"Yet I had planted thee a noble vine, wholly a right

seed ; how then art thou turned into the degenerate plant of a strange vine unto me ?”

The wild vine, producing the sour grape mentioned occasionally in Scripture, is probably* the *labrusca* (wild vine, or fox-grape,) which grows freely in Palestine. Its berries are rather small, and never equal to the true grape. They were used for making verjuice.

“There is a kind of wild vine which grows near the highways and hedges of Judæa, which has a small grape that is black when ripe, and is the wild grape to which the prophet compares the inhabitants of Jerusalem; and men of Judah. These are also the grapes to which another prophet refers, when he predicts the approaching judgment on that rebellious people.”†—RAE WILSON’S *Travels*, vol. i. p. 237.

“The most elegant plant that occurred in the whole forest was the native vine of Africa. This creeper ran to the very summits of the trees, and bore a fruit in size and appearance not unlike the Morelle cherry, seldom more than two or three in a cluster, of a very agreeable and delicate subacid flavour. The leaves of this vine are shaped like those of the ivy, dark green, and smooth on the upper, and rather woolly on the under surface ; not deciduous, but evergreen.”—BARROW’S *Travels*.

VINE OF SODOM.

DEUTERONOMY xxxii. 32.

“Their vine is of (worse than) the vine of Sodom, and of the fields of Gomorrah ; their grapes are grapes of gall, their clusters are bitter.”

There are several plants which each claim to be the vine of Sodom, yielding the so-called *apples of Sodom*. The principal of these are, 1st, one kind of *solanum*, or

* It is thought by some that a kind of *solanum*, commonly called *Wolf’s Grape*, is the plant meant by the prophet, for it grows much in the vineyards, and is very pernicious to them. See p. 292.

† Ezek. xviii. 2.

mad-apple ; and 2nd, the 'asher, or 'ösher of the Arabs. Of the former Dr. Wilson writes :—A “ shrubby plant, from about three to five feet in height, and bearing a round, yellowish berry, (about an inch and a half in diameter,) particularly attracted our attention, from its great abundance. An Arab, who observed us handling the fruit of it, informed us that it is known by the name of ‘ Leimún Lút.’ On our asking him the reason of the designation, he said, the plant formerly bore excellent limes ; but, for the wickedness of the people of the plain it was cursed by Lot, and doomed to bear the bitter fruit which it now yields. On our learning from him, and our other attendants, that no other fruit passes by a similar name in the plain, we came to the conclusion that, as far as present native belief indicates, we had before us the most noted species of the fruits

‘ Which grew

Near that bituminous lake where Sodom stood.’

It proved to be a species of *solanum* (mad-apple).* I took a couple of the berries with me to Britain. On opening one of them in the spring of 1845, I extracted a dozen of the small black seeds, not unlike those of a potato, which it contained, and sent them to my friend, Alexander Thomson, Esq., of Banchory, who takes no common interest in all that pertains to the countries of the East, with the request that he would test their vegetative powers in one of his hot-houses. Four thriving plants made their appearance as their product, and I had the pleasure, at the end of the two subsequent autumns, of seeing them in full flower, and witnessing a drawing made of the plant. No seeds have yet been perfectly formed upon any of them.....Hasselquist calls the berries ‘ mad-apples.’ He observes, ‘ These I found in plenty about Jericho, in the vales near Jordan, not far from the Dead Sea. It is true, they are sometimes filled with a dust ; but this is not always the case, but only when the fruit is attacked by an insect (*tenthredo*), which turns all the inside into dust, leaving the skin

* Not the kind mentioned in p. 273.

only, entire, and of a beautiful colour.* This plant we were inclined, with Hasselquist, to consider the apple of Sodom. It is perhaps the '*vine of Sodom*' that is referred to in Scripture as an emblem of the enemies of the Lord's people. It is a curious fact that one of the names of a species of solanum allied to that to which I refer, is, among the Arabs, that of 'grape of the wolf.' It is sometimes ate by the poorer classes in Egypt."—See WILSON's *Lands of the Bible*.

The 'asher, which is by some travellers considered to bear "the apples of Sodom," Dr. Wilson thus describes :—"We noticed the plant called '*asher*' by the Arabs... Its stem in the valley of the Jordan were fully as large as those seen in India, being in some instances as thick as a man's leg or thigh. Seetzen and Dr. Robinson think that this plant yields the celebrated 'apples of Sodom.' The fruit, which has a yellowish colour, is certainly like an apple or orange in size and form ; but it is more substantial than would be inferred from Dr. R.'s account of it...Some of the fruit I was able to take with me to Europe. A sort of silky flax, according to Dr. Roxburgh, is in some parts prepared from the *bark* of the young shoots. I do not know that the plant is as much celebrated among the Arabs, as among the Hindoos, for its medicinal properties."

Dr. Robinson's account is as follows :—"One of the first objects which attracted our notice on arriving at Engedi was a tree with singular fruit...the '*ösher*' of the Arabs...which is found in abundance in Upper Egypt and Nubia, and Arabia Felix ; but seems to be confined in Palestine to the borders of the Dead Sea...We saw here at Engedi several trees of the kind, the trunks of which were six or eight inches in diameter ; and the whole height from ten to fifteen feet. It has a greyish,

* It is either this fruit, when good, or that of another kind of solanum very like it, which is dried and preserved in salt for winter. It resembles a small golden-pippin. In some places it is called the egg-plant. The tomato, or love-apple, is another kind of solanum, often seen in our English markets.

cord-like bark, with long oval leaves...and when its leaves and flowers are broken off, it discharges copiously a milky fluid. The fruit greatly resembles externally a large smooth apple or orange, hanging in clusters of three or four together, and when ripe is of a yellow colour. It was now fair and delicious to the eye, and soft to the touch; but on being pressed or struck, it explodes with a puff, like a bladder or puff-ball, leaving in the hand only the shreds of the thin rind, and a few fibres. It is, indeed, filled chiefly with air, like a bladder, which gives it the round form; while in the centre a small slender pod runs through it from the stem, and is connected by thin filaments with the rind. The pod contains a small quantity of fine silk with seeds, precisely like the pod of the silk-weed, though very much smaller. The Arabs collect the silk, and twist it into matches for their guns, preferring it to the common match, because it requires no sulphur to render it combustible."

"The most definite account we have of the apple of Sodom, so called, is in Josephus...After speaking of the conflagration of the plain, and the yet remaining tokens of the Divine fire, he remarks that 'there are still to be seen ashes reproduced in the fruits; which, indeed, resemble fruits fit to be eaten in colour, but on being plucked with the hands are dissolved into smoke and ashes.' In this account, after a due allowance for the marvellous in all popular reports, I find nothing which does not apply almost literally to the fruit of the *'ösher*, as we saw it. It must be plucked and handled with great care, in order to preserve it from bursting. We attempted to carry some of the boughs and fruit with us to Jerusalem, but without success."

It must, however, be a matter of uncertainty, whether Moses really intended to point out any particular plant when he spoke of the vine and grapes of Sodom. He may merely have alluded to the productions of that region generally as under the curse of God, and therefore bitter and evil.

WILLOW.

LEVITICUS xxiii. 40.

“Willows of the brook.”

PSALM cxxxvii. 2.

“We hanged our harps upon the willows” (by the rivers of Babylon).

ISAIAH xliv. 4.

“They shall spring up...as willows by the water-courses.”

We all know the willow-tree. It is common in Judæa, where weeping-willows bend over the waters of Jordan. The Jews still present branches of willows in their synagogues, and decorate their tents with them when they keep the feast of Tabernacles. Of the osier-willow the poor Jews used to make baskets, to carry the offering of their first-fruits to the Temple. No tree has been more useful than the willow. The poor savage uses its wood to wattle his rude hut, and for baskets. Boats have often been made of it, and then covered with skins; and even our own forefathers sailed in these wicker vessels. The bark is used in dressing leather; the charcoal is employed in making gunpowder; a salt much valued in medicine, particularly in fevers, is obtained from different parts of the plant; and the whiter and more delicate portions of the wood take a good dye, and are often used by cabinet-makers.

WORMWOOD.

DEUTERONOMY xxix. 18.

“Lest there should be among you man, or woman, or family, or tribe, whose heart turneth away this day from the Lord our God, to go and serve the gods of these

nations ; lest there should be among you a root that beareth gall (or, a poisonous herb, Marg.) and wormwood."

PROVERBS v. 4.

"Her end is bitter as wormwood."

JEREMIAH ix. 15.

"Behold, I will feed them, even this people, with wormwood, and give them water of gall to drink."

AMOS v. 7.

"Ye who turn judgment to wormwood, and leave off righteousness in the earth."

REVELATION viii. 10, 11.

"And the third angel sounded, and there fell a great star from heaven, burning as it were a lamp, and it fell upon the third part of the rivers, and upon the fountains of waters : and the name of the star is called *wormwood*, and the third part of the waters became wormwood ; and many men died of the waters, because they were made bitter."

Rauwolf writes that this plant grows abundantly in Palestine. Its leaves are small, and ash-coloured ; it has many small stalks, full of small yellowish seeds ; smells disagreeably, and tastes salt and bitter.

Hasselquist mentions seeing immense quantities of wormwood along the shore on his way to Sidon.

ZUKKUM.—OLEASTER, OR WILD OLIVE.

ROMANS xi. 17, 24.

"And if some of the branches be broken off, and thou, being a wild olive-tree, wert grafted in among them.....If thou wert cut out of the olive-tree, which is wild by nature, and wert grafted contrary to nature into a good olive-tree ; how much more shall these, which be the natural branches, be grafted into their own olive-tree?"



OLEASTER.

The zūkkûm is a thorny-tree, resembling a plum-tree, and sometimes called "the plum-tree of Jericho." One kind of zūkkûm-tree is supposed to be the same with the oleaster, or wild olive, mentioned by St. Paul. It bears a green nut, with a thick shell, and very small kernel. These kernels the Arabs bray in a mortar, and then put the pulp into scalding-water, and skim off the oil which rises. Or else they grind the whole nut, and press an oil out of it, as they do out of olives, and call it a balsam. This balsam, or oil of Jericho, (which is quite different from the balm of Gilead before mentioned,) is highly prized by the Arabs as a remedy for wounds and bruises. When fresh, it is said to resemble in taste and colour, the oil of sweet almonds. Mariti saw the Arab women bruise and break the nut with stones, and then press out the oil with the hands. Afterwards the mass was bruised anew, and thrown into warm water, from which

the oil was then skimmed off.”—See ROBINSON’S *Researches*, vol. ii. p. 291, 292.

“It is a handsome tree, something resembling the laburnum of our shrubberies. It bears a berried nut, from which the Arabs express an oil which they sell to the pilgrims as the oil of Zaccheus, and to which great medical properties are attributed. It was this tree, according to tradition, which was ascended by Zaccheus, as our Lord passed by on his way to Jericho, although expressly stated in the Bible that it was a sycamine tree.”—See *Jewish Intelligence*, May, 1847.

DWELLING UNDER TREES.

GENESIS xviii. 4, 8.

“(And Abraham said)...Rest yourselves under the tree...And he stood by them under the tree, and they did eat.”

JUDGES iv. 5.

“(Deborah) dwelt under the palm-tree of Deborah, between Ramah and Bethel in Mount Ephraim.”

vi. 19.

“The flesh he put in a basket, and he put the broth in a pot, and brought it out unto him *under the oak*.”

1 SAMUEL xiv. 2.

“And Saul tarried...under a pomegranate tree.”

1 KINGS iv. 25.

“And Judah and Israel dwelt safely, every man under his vine and under his fig-tree, from Dan even to Beer-sheba, all the days of Solomon.”

“We pitched our tent under a *nabbok*-tree, resembling a plane-tree, and felt how naturally it is recorded, ‘Deborah dwelt under the palm-tree.’ ‘Saul tarried under a pomegranate-tree;’ and of Abraham, who had received the three angels into his tent, that ‘he stood by them

under the tree.”—*Narrative of a Mission of Inquiry to the Jews*, p. 94.

“We passed a small village where many of the villagers were assembled under the shade of a large nabbok-tree, the only tree of considerable size within view. We were at some distance, and did not see distinctly how they were employed; but they seemed to be enjoying an evening’s relaxation in the cool of the day...”—*Ibid.*, p. 118.

In a letter from Beyroot, Mr. Paxton writes:—“While some have tents on the top of the house, others have them out under the trees; and the fig-tree and the vine, having large shady leaves, are very favourable for this. Thus they sit ‘under their vine and fig-tree.’ And where they do not use tents, they are very fond of sitting out under the trees. They usually take out a straw-mat, or small carpet, which they spread down; sometimes on this they lay their beds, and sit on them. They have not feather-beds, as we have, but a kind of wool-mattress, which is easily folded up and removed. Mr. and Mrs.——, who are of our party, are natives of this place. They often take out their mat, and spread it under a tree, and spend much of the day there. In our walks we see many thus under the vines and fig-trees, whiling away their hours.”—PAXTON’S *Letters from Palestine*, p. 7.

“...Occasionally we noticed a fig-tree, up which a vine had climbed, so that the combined shade ‘of their vine and fig-tree’ might here be enjoyed together.....

“One of the camel-drivers, pointing to a cluster of six large fig-trees, cried out, ‘Under the fig-tree!’ and soon we felt the pleasantness of this shade; for there is something peculiarly delightful in the shade of the fig-tree. It is far superior to the shelter of a tent, and perhaps even to the shadow of a rock; since, not only does the mass of heavy foliage completely exclude the rays of the sun, but the traveller finds under it a peculiar coolness arising from the air gently creeping through the

branches. Hence...the prophecy, 'In that day shall ye call every man his neighbour under the vine and under the fig-tree.' Restored and happy Israel shall invite one another to sit down beneath their embowering shade, to recount the glorious acts of the Lord. Reclining under these six fig-trees we enjoyed a short repose, the servants and camels being all gathered round us under the same grateful shade."—*Narrative of a Mission to the Jews*, pp. 105, 108.

"The vines were twining round the fig-trees for support, and many of the fig-trees were planted in a vineyard."—*Ibid.*, p. 124.

TERRACED HILLS.

[PSALM lxxx. 10 ; CANT. vii. 11, 12 ; EZEK. xxxvi. 8, 9 ;
JOEL iii. 18.]

"We often counted forty, fifty, sixty, and even seventy terraces from the bottom of the valley up to the summit of the mountain...What a garden of delights this must have been, when, instead of grass making green the surface, verdant and luxuriant vines were their clothing ! ...Nowhere could we have better understood the invitation, 'Let us lodge in the villages ; let us get up early to the vineyards ; let us see if the vine flourish, whether the tender grape appear, and the pomegranates bud forth.' We could understand how the words of Joel shall yet be literally true, 'the mountains shall drop down new wine,' when every vine on these hills shall be hanging its ripe clusters over the terraces. In observing, too, the singular manner in which the most rocky mountains have at one time been made, through vast labour and industry, to yield an abundant return to the husbandman, we saw clearly the meaning of the promise in Ezekiel, 'But ye, O mountains of Israel, ye shall shoot forth your branches, and yield your fruit.' There

seems to be little doubt that the Psalmist refers to the mode of training the vine over these terraces, when he says, 'The hills were covered with the shadow of it.'

The same traveller writes soon after :—"Figs and vines were cultivated on many of the terraces here ; but, when we reached the bottom of the valley, it was one complete garden, or rather orchard of fruit-trees. The vines, the figs, pomegranates, peaches, citrons, quinces and lemons, were all budding or ripening in a most luxuriant manner. The scene afforded a perfect picture of outward peace and prosperity."—*Narrative of a Mission to the Jews*, pp. 123, 124.

"We arrived at Ramouni, (that is, 'pomegranate,') a village finely embosomed in fig-trees, olives, and pomegranates, from the midst of which came the voice of the blackbird and turtle-dove."—*Ibid.*, p. 226.



TERRACED HILLS.



CHAPTER IV.

AGRICULTURE.

PLOUGHING.—PLUCKING CORN.—WINNOWING.—THRESHING-
 FLOORS.—BEATING OUT GRAIN.—PRUNING-HOOK.—OX-GOAD.
 —YOKE FOR OXEN.—ILLUSTRATION OF ISAIAH xvii. 13.—
 THRESHING-FLOOR ON MOUNT LEBANON.—WHEAT-HARVEST AT
 JERICO.—ILLUSTRATION OF PSALM lxxv. 13.—AGRICULTURAL
 SCENE IN GEORGIA.

DEUTERONOMY xxv. 4.

“Thou shalt not muzzle the ox when he treadeth out the corn.” [1 Cor. ix. 9.]

JUDGES iii. 31.

“Shamgar, the son of Anath,...slew of the Philistines six hundred men with an ox-goad.”

RUTH ii. 17.

“So she gleaned in the field until even, and beat out that she had gleaned.”

RUTH iii. 2.

“Behold, he winnoweth barley to-night in the threshing-floor.” [Read Book of Ruth.]

1 SAMUEL xxiii. 1.

“The Philistines...rob the threshing-floors.”

PSALM i. 4.

“The ungodly...are like the chaff which the wind driveth away.” [JOB xxi. 18; PSALM xxxv. 5; ISAIAH v. 24,—xxix. 5,—xli. 15; ZEPHANIAH ii. 2.]

cxix. 3, 6.

“The plowers ploughed upon my back ; they made long their furrows.....The grass upon the house-tops ; which withereth afore it groweth up ” [be *plucked-up*, Prayer-Book Version.]

PROVERBS xx. 26.

“A wise king scattereth the wicked, and bringeth the wheel over them.”

ISAIAH ii. 4.

“And they shall beat their swords into ploughshares, and their spears into pruning-hooks.”

xvii. 13.

“The nations...shall be chased as the chaff of the mountains before the wind.” [DANIEL ii. 35.]

xxviii. 27, 28.

“For the fitches are not threshed with a threshing-instrument, neither is a cart-wheel turned about upon the cummin ; but the fitches are beaten out with a staff, and the cummin with a rod. Bread-corn is bruised ; because he will not ever be threshing it, nor break it with the wheel of his cart, nor bruise it with his horsemen.”

xxx. 24, 28.

“Clean provender, which hath been winnowed with

the shovel, and with the fan.....And his breath, as an overflowing stream, shall reach to the midst of the neck, to sift the nations with the sieve of vanity: and there shall be a bridle in the jaws of the people, causing them to err."

ISAIAH xxxii. 20.

"Blessed are ye that sow beside all waters, that send forth thither the feet of the ox and the ass."

xli. 15, 16.

"Behold, I will make thee a new sharp threshing instrument having teeth; thou shalt thresh the mountains, and beat them small, and shalt make the hills as chaff. Thou shalt fan them, and the wind shall carry them away, and the whirlwind shall scatter them."

JEREMIAH li. 33.

"For thus saith the Lord of Hosts, the God of Israel, The daughter of Babylon is like a threshing-floor, it is time to thresh her. Yet a little while, and the time of her harvest shall come."

HOSEA x. 11.

"And Ephraim is as an heifer that is taught, and loveth to tread out the corn; but I passed over upon her fair neck; I will make Ephraim to ride; Judah shall plow, and Jacob shall break his clods."

xi. 4.

"I drew them with cords of a man, with bands of love, and I was to them as they that take off the yoke on their jaws, and I laid meat unto them."

AMOS ix. 9.

"I will sift the house of Israel among all nations, like as corn is sifted in a sieve, yet shall not the least grain fall upon the earth."

MICAH iv. 12, 13.

"He shall gather them as the sheaves into the floor.

Arise, and thresh, O daughter of Zion : for I will make thine horn iron, and I will make thy hoofs brass ; and thou shalt beat in pieces many people.”

HABAKKUK iii. 12.

“Thou didst thresh the heathen in anger.”

MATTHEW xiii. 30.

“Let both grow together until the harvest : and in the time of harvest I will say to the reapers, Gather ye together first the tares, and bind them in bundles to burn them : but gather the wheat into my barn.”

LUKE iii. 17.

“Whose fan is in his hand, and he will thoroughly purge his floor, and will gather the wheat into his garner ; but the chaff he will burn with fire unquenchable.”

xxii. 31.

“And the Lord said, Simon, Simon, behold, Satan hath desired to have you, that he may sift you as wheat.”

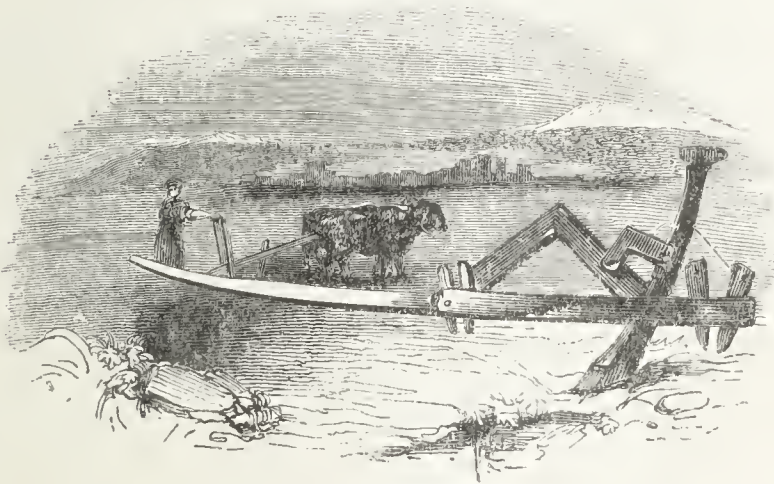
In Egypt they plough with two oxen : the plough is remarkably light, and has only one handle, which the ploughman holds with one hand, and carries a long stick in the other.—RICHARDSON'S *Travels*.

In Persia it is for the most part drawn by one ox only, and not unfrequently even by an ass, although it is more ponderous than in Palestine.—MORIER.

With such an imperfect instrument, the Syrian husbandman can do little more than scratch the surface of the field, or clear away the stones or weeds that encumber it, and prevent the seed from reaching the soil. The ploughshare is a piece of iron, broad, but not large, which tips the end of the shaft. So much does it resemble the short sword used by the ancient warriors, that it may with very little trouble be converted into

that deadly weapon. In allusion to this, the prophet Joel summons the nations to leave their peaceful employments in the cultivated field, and buckle on their armour.*

“I obtained,” writes an Eastern traveller, “a model of a plough at Nazareth; it is differently constructed from that used in Britain. It is not moved upon wheels; the share, which is small, scarcely grazes the earth; and it has only one handle or shaft, with a small piece of wood across the top, for the husbandman to guide it, resembling the head of a staff, or the handle of a spade. The man holds this in his right hand, and carries a long stick in his left, with which he goads the oxen. The whole machine is made so extremely light, that a person might with facility carry it in his arms. The share is



covered with a piece of broad iron, pointed at the end, so as it might be converted into a weapon of warfare.” —RAE WILSON’S *Travels in the Holy Land*, vol. i. p. 401.

On his road to Jerusalem, Mr. Wilson remarks :—“The husbandmen, with ploughs in a state of patriarchal rudeness, were tilling the soil; and, what is singular, they strewed the surface of the fields with seeds, and then

* Joel iii. 10.

ploughed them in. The peasants engaged in this cultivation were, in general, armed; but, whether this was the usage of the country, or to defend them from being robbed of their corn, I could not ascertain. One thing, however, we know, is, that it was common for seed to be stolen, as we may find by referring to the inspired page. *The furrows are made in a direct line*, and an allusion to this appears to be involved in the complaint of the royal Psalmist."

Speaking of the land about Ephesus, the same traveller writes:—"The penetration of the plough into the land is very shallow, and *the furrows are long*."—RAE WILSON'S *Travels*, vol. i. p. 185; ii. p. 217.

"All that occurred to us new in this day's travel was a particular way used by the country people in gathering their corn, it being now harvest-time. They plucked it up by handfuls from the roots, leaving the most fruitful fields as barren as if nothing had ever grown on them. This was their practice in all places of the East that I have seen; and the reason is, that they may lose none of their straw, which is generally very short, and necessary for the sustenance of their cattle, no hay being here made. I mention this, because it seems to give light to that expression of the Psalmist, 'Which withereth before it be plucked up;' where there seems to be a manifest allusion to this custom. There is indeed mention of a mower in the next verse; but, then, it is such a mower as fills not his hands; which confirms, rather than weakens the preceding interpretation."—MAUNDRELL'S *Journey from Aleppo to Jerusalem*, p. 144.

The manner of winnowing corn in warm climates is to throw it up in the air when the wind is brisk: the grain then falls, and the wind carries away the husk. In Palestine, as in other countries bordering on the sea, a breeze usually springs up from the sea every evening; and this explains why barley should be winnowed *at night*.—CALMET.

It is not many years since this was the usual method

of winnowing in the West of England, and is probably not yet entirely laid aside.

“In a field under the hill they were winnowing barley, casting it up to the wind with a sort of wooden shovel or fan.”—*Mission to the Jews*, p. 104.

In Egypt the use of the flail is unknown. To separate the grain from the straw, the inhabitants prepare, with a mixture of earth, &c., spacious floors, well beat, and very clean. The rice is spread thereon in thick layers; they have then a sort of cart formed of two



pieces of wood, joined together by two cross pieces; it is almost in the shape of sledges, which serve for the conveyance of burthens in the streets of our cities. Between the longer sides of this sledge are fixed, transversely, three rows of small wheels, made of solid iron, and narrowed off towards their circumference. On the forepart is a wide and high seat, upon which a man sits, driving two oxen harnessed to the machine. The whole

moves on slowly, and always in a circular direction, over every part of the heap of rice, until there remains no more grain in the straw. When it is thus beat, it is spread in the air to be dried. Several men walk abreast, to turn it over, each of whom, with his foot, makes a furrow in the layer of grains, so that in a few moments the whole mass is moved, and that part which was underneath is again exposed to the air.—SONNINI; HARMER's *Observations*, vol. iv. pp. 134, 135.

Thus the wheel is the instrument of crushing the grain, and causing it to be separated. So does a wise king bring the power of the law upon the wicked, crushes their conspiracies, defeats their projects, and gains an entire victory over their secret and malicious designs.

"November 27, 1826. Left Berhampore, and arrived at Doult. The country on every side exhibited the pleasing scenes of industry. Some persons were preparing the ground by digging, and others by ploughing with oxen, for a future crop: others were cutting their harvest of rice, and others *treading out their grain*, after the manner described in Scripture. At one place I noticed two sets of oxen, four abreast, the one set following the other in a circle, and which, as they trod out the grain, continued eating, I inquired of the men why they permitted the oxen to eat? They replied, 'It is contrary to our shasters (holy books) to *muzzle the ox that treadeth out the corn*.'"—REV. M. HILL.

"In Greece, horses are employed to tread out the corn, as was sometimes the case in Judæa: * and with regard to them, the law is observed which Moses gave to the Jews concerning oxen. Hence they find means, in the progress of their labour, to partake pretty largely both of the straw and of the grain".—HARTLEY's *Researches*, p. 366.

These nations continue to tread out their corn after the primitive custom of the East. Instead of beeves, they frequently make use of mules and horses, by tying

* Isaiah xxviii. 28.

in like manner by the neck three or four of them together, and whipping them afterwards round about the treading-floors, were the sheaves lie open and expanded, in the same manner as they are placed and prepared with us for threshing. This, indeed, is a much quicker way than ours, though less cleanly. For as it is performed in the open air, upon any round, level plot of ground, daubed over with cows' dung, to prevent, as much as possible, the earth, sand, or gravel from rising, a great quantity of them all, notwithstanding this precaution, must unavoidably be taken up with the grain. At the same time the straw, which is their chief and only fodder, is hereby shattered to pieces ; a circumstance alluded to in 2 Kings xiii. 7, where the king of Syria is said to have *made the Israelites like dust by threshing*.

After the grain is trodden out, they winnow it by throwing it up against the wind with a *shovel*,—the instrument intended in Matt. iii. 12, Luke iii. 17 ; where the text should rather run, "*Whose shovel, or fork, (which is a portable instrument,) is in his hand,*"—the fan being a cumbersome machine. Both the shovel and the fan are mentioned in Is. xxx. 24.—See SHAW'S *Travels*.

During his visit at Hebron, Dr. Robinson writes :—
"The fine grassy slope on which we were encamped was occupied by threshing-floors, where the various processes of threshing, or rather treading out the grain, were continually going on. The wheat-harvest here in the mountains had not yet arrived ; but they were threshing barley, lentiles, and also vetches, which are raised chiefly for camels. The various parcels had apparently lain here for several days ; the people would come with their cattle, and work for two or three hours, and then go away. Some had three animals, some four ; and once I saw two young cattle and a donkey driven round together. In several of the floors they were now winnowing the grain, by tossing it up against the wind with a fork. Here we needed no guard around our

tent. The owners of the crops came every night and slept upon their threshing-floors to guard them; and this we had found to be universal in all the region of Gaza. We were in the midst of scenes precisely like those of the Book of Ruth; were Boaz winnowed barley in his threshing-floor, and laid himself down at night to guard the heap of corn."—Dr. ROBINSON'S *Researches*, vol. ii. pp. 445, 446.

"At this threshing-floor were to be seen in the evenings the different proprietors preparing to watch their *heaps*, which soon accumulated to large quantities, reminding us of Boaz, (who) went to lie down at the end of the heap of corn. Here at Nazareth, at this distance of time, were to be seen individuals, evening after evening, lying down at the ends of their *heaps*, and after they had well eaten and drank too, for their principal meal is always in the evening."—*Bible in Palestine*, pp. 80, 81.

"Close to the village lay a threshing-floor, where twenty or thirty pair of oxen were employed in treading out corn. One peasant attended to each pair, and another tossed up the straw with a wooden fork, and spread it out again for them to tread...The camels, too, were carrying home loads of ripe sheaves, to the sound of the tinkling bell round their neck....."

"Several women were beating out with a stick handfuls of the grain which they seemed to have gleaned. This process we saw often."—*Ibid.*, p. 385.

"On one of the ledges of the rock beneath us sat two men beating out corn with a staff; which is used instead of our flail, and is referred to by Isaiah."—*Mission to the Jews*, p. 134.

"A large threshing-floor* was near, and we put many questions to the peasants in regard to their farming-

* The threshing-floors among the ancient Jews, as they are to the present day in the East, were merely round, level plats of ground in the open air.

operations. A flat board, which is drawn over the corn to bruise it, is called *oah*. It is made of two or three boards firmly united, and the bottom is spiked with stones arranged at regular distances, not unlike the nails in a ploughman's shoe. It is drawn by two horses or oxen, a boy sitting upon it, and driving them round and round. This instrument is universally used, and is probably the threshing instrument mentioned by the prophet. The wooden fork for throwing the bruised corn up in the air, is called *midra*, and the flat, hollow wooden shovel next used for a similar purpose, is called *raha*. The latter is evidently the *fan* of the New Testament. When this implement is used, the wheat falls down in a heap on the threshing-floor, while the chaff is carried away by the wind, and forms another large heap at a little distance. The peasants do not burn it; they give it to their cattle; but it is so perfectly dry, that, were it set on fire, it would be *impossible to quench it*.—*Narrative of a Mission to the Jews*, p. 308.

“A labourer was returning from the country with his pruning-hook in his hand, a long piece of iron curved toward the point. This pruning-hook might once have been a spear, and could easily be converted into one again.”—*Ibid.* p. 344.

The goad used in Palestine and Syria for driving oxen while ploughing, is of “extraordinary length, sharp at one end for driving the cattle, and at the other is a kind of spade for cleansing the plough from the weeds and mud that retard its motion, so that such goad is necessary to avoid the incumbrance of two instruments.”—RAE WILSON.

Mr. Maundrell describes this implement as “about eight feet long, and at the bigger end about six inches in circumference, armed at the lesser end with a sharp prickle for driving the oxen, and at the other end with a small paddle of iron, strong and massive, for cleansing the plough from the clay.”

“It was, no doubt, this latter part of the instrument

which Shamgar used as a battle-axe, and thus killed so many of his enemies.”—HARTLEY.

“Passing some country waggons (in Russia), we examined minutely the large clumsy yoke which is fastened on the necks of oxen. It is a large wooden frame, so heavy and stiff, that the animal cannot put down its head to feed, unless the side pins be taken out, and its neck released from the yoke. This opened up to us the meaning of the prophet, ‘I was to them as they that *take off the yoke on their jaws, and I laid meat unto them.*’”—*Narrative, &c.*, p. 403.

ILLUSTRATION OF ISAIAH XVII. 13.

After leaving the shores of the Sea of Galilee, and while travelling towards Mount Tabor, “our way lay through large fields of splendid thistles, having purple flowers, and very fragrant. The stalk was often six or eight feet high, bearing twelve or fifteen heads. Again we were reminded of the oft-recurring threatening, ‘There shall come up briars and thorns.’ But there is a different day approaching, of which the same prophet writes, ‘The nations shall rush like the rushing of many waters ; but God shall rebuke them, and they shall flee far off, and shall be chased *as the chaff of the mountains before the wind and like thistle-down* before the whirlwind.*’ At the very moment, on a neighbouring height before us, a husbandman was tossing up his wheat into the air, that the brisk mountain breeze might carry the chaff away ; and often by our side the wind caught up some of the loose thistle-down, and whirled it rapidly over the plain. With the same ease and rapidity shall Israel’s enemies be swept away : ‘Behold, at even-tide trouble, and before the morning he is not ! This is the portion of them that spoil us, and the lot of them that rob us.’”—*Narrative, &c.*, p. 297.

* Translated in our version “rolling thing.”

THRESHING-FLOOR ON MOUNT LEBANON.

“There was near this place (in the neighbourhood of Zahle on Mount Lebanon), which was on the edge of the plain, a most noble threshing-floor. It was a large space of several acres, and there may have been from a dozen to twenty floors, without any partition between them. On some of them people were employed in threshing grain, others separating the straw and chaff from the wheat ; on others lay great piles of grain, some clean, and others mixed with the chaff and straw. They separate the wheat by throwing it up, and letting the wind blow the chaff away. Of course, they must wait for a wind. I saw no instrument to make wind. The threshing instrument is a board, about three feet in width, and six or eight feet in length ; at the fore end it is turned up, a little like a sleigh. The board is about three inches in thickness. On the under side many holes are cut in it, from an inch and a half to two inches, and in these are fastened pieces of stone, flint, or iron ; these project nearly an inch from the face of the board, and serve as teeth, to tear the heads of the grain in pieces. Oxen are fastened to the front of these boards, and driven round the floor, drawing this instrument after them. The driver of the oxen usually sits or stands on the instrument. This is the common threshing machine in these countries. I see it every where and I have seen no other. It would seem that it is the same instrument that was used in the days of the prophet, who speaks of a ‘new threshing instrument having teeth.’ The oxen are without muzzle, and often as they pass round take up a few straws, and feed on them. Mules, donkeys, and at times, the camel, are used in bringing their grain to the floor, and in carrying away the straw.”—PAXTON’S *Letters*.

WHEAT-HARVEST AT JERICHO.

“It was truly a scriptural harvest scene, where the reaping and the threshing go on hand in hand. It brought up before our eyes the scenes of the book of Ruth. The people, we found, were old acquaintances, who had come down to the Ghôr in a body, with their wives and children, to gather in the wheat harvest. The wheat was beautiful; it is cultivated solely by irrigation, without which nothing grows in the plain. Most of the fields were already reaped. The grain as soon as it is cut, is brought in small sheaves to the threshing-floors on the backs of asses, or sometimes of camels. The little donkeys are often so covered with their load of grain, as to be themselves hardly visible; one sees only a mass of sheaves moving along as if of its own accord. A level spot is selected for the threshing-floors, which are then constructed near each other, of a circular form, perhaps fifty feet in diameter, merely by beating down the earth hard. Upon these circles the sheaves are spread out quite thick, and the grain is trodden out by animals. Here were no less than five such floors, all trodden by oxen, cows, and younger cattle, arranged in each case five abreast, and driven round a circle, or, rather in all directions, over the floor. The sled, or sledge, is not here in use, though we afterwards met with it in the north of Palestine. By this process the straw is broken up and becomes chaff. It is occasionally turned with a large wooden fork having two prongs; and, when sufficiently trodden, is thrown up with the same fork against the wind, in order to separate the grain, which is then gathered up and winnowed. The whole process is exceedingly wasteful, from the transportation on the backs of animals to the treading out on the bare ground. The precept of Moses, ‘Thou shalt not muzzle the ox when he treadeth out the corn,’ was not very well regarded by our Christian friends, many of their animals having their

mouths tied up ; while among the Muhammedans I do not remember ever to have seen an animal muzzled. This precept serves to show that of old, as well as at the present day, only neat cattle were usually employed to tread out the grain.”—ROBINSON’S *Researches*, vol. ii. pp. 276—278.

“ We could not help smiling to see with what evident pleasure they (the oxen) trudged round and round, as if they quite enjoyed it, justifying the figure made use of by the prophet, ‘ Ephraim is a heifer that is taught, and loveth to tread out the corn.’ ”—*Bible in Palestine*, p. 64.

“ We met numerous camels laden with the harvest, which seems to be the general mode of conveying it home, to the threshing-floors, in the immediate vicinity of the villages. A line of them is always tied together, and thus they follow on. The second is fastened to the first by a woollen string, the fourth to the third, and so on. Several of them thus connected together, are called in Scripture by an expression which is rendered in our version of Isaiah lx. 6, ‘ The multitude of camels.’ A servant leads the first, and to the last a bell is attached, which gives notice of their approach.”—*Bible in Palestine*, p. 92.

ILLUSTRATION OF PSALM LXV. 13.

“ The pastures are clothed with flocks ; the valleys also are covered over with corn ; they shout for joy, they also sing.”

Travelling through a fertile country from Hebron to Ramleh, Dr. Robinson writes : “ The hills, where not tilled, were bushy and green, and sprinkled with numerous flocks ; the valleys broad, and covered with a rich crop of wheat ; the fields full of reapers and gleaners in the midst of the harvest ; with asses and camels receiving their loads of sheaves, and feeding unmuzzled and undisturbed upon the ripe grain.”—ROBINSON’S *Researches*, vol. iii. p. 6.

AGRICULTURAL SCENE IN GEORGIA.

“The system adopted by the natives of Georgia in getting in and securing their corn, is very peculiar. After the wheat is cut, it is spread upon a levelled plot of ground, where the clay is stiff, and there, instead of being threshed, it is treated in the following manner : a board, about six feet long and twenty-eight inches broad at one end, but running into a point at the other, and formed of a single piece of hard wood, is now had recourse to ; it is about two inches thick, with the pointed end turned upwards. The greatest part of the under surface is provided with lozenge-shaped holes, disposed in regular rows, into which sharp pieces of hard limestone, or half-glazed tiles are inserted, so as to give this surface something of the character of a very coarse file. The upper side has a rib, running from the pointed end, cut out of the same piece as the board itself, and in this a hole is bored, through which a strong leathern thong, or twisted willow-rod is drawn ; to this a pair of oxen or buffaloes are yoked. The husbandman now mounts upon it, and drives the cattle, with his board and himself, in all directions over the corn. There are frequently as many as five of these threshing machines in motion together ; yet they make way for each other with great address, though the teams are without reins, and managed merely with a long wand, or by the voice. The peasant, when thus engaged, often takes his child with him to enjoy a jaunt ; and his wife may at times be seen engaged in knitting on the same rude vehicle. By this operation, which lasts about half a day, the corn is removed from the ear, and at the same time the short straw is crushed into small pieces, and rubbed quite soft....The corn is then shovelled towards that side from which the wind blows, the ground swept, and the winnowing shovel employed to separate the wheat from the chaff. This is an interesting sight for the stranger ;—the un-

dressed corn flung from many large shovels into the air, and the grain pouring down a copious blessing from the sky, while the chaff is carried away like a cloud before the wind. One portion of the corn is now quite clean and is taken away ; but another portion still remains mixed with chaff, which has to be removed either by a second winnowing, or the sieve.

“The cleanest and best corn is laid up in woollen sacks in the house ; the rest is conveyed to the corn-magazines, which are of a sugar-loaf shape, sunk in the ground, and often lined with stones and plastered. The floor is spread over with a layer of coarse chaff, and the side walls covered with large fresh ferns. It is now



ready for the reception of the corn, which is discharged directly out of the waggon, between three pieces of felt cloth fixed to the edge of the opening, which answer the purpose of a funnel. This pit is about eight feet deep. When it is nearly full, fern is laid over the corn, and the mouth is covered with strong boards, and then

earth laid over all, till it is on a level with the adjacent ground. This is so carefully done, that the place may be passed over without notice by a stranger, and even waggons may be driven across it; so that these magazines, which are for the most part in the open courtyard, are well secured from thieves. At the same time, it must be acknowledged, that this mode of storing corn, compared with the danger to which our magazines in Europe are exposed, is a strong evidence of the honesty of the people.

"In cleansing the corn with the sieve and the winnowing shovel, the hard empty ears separate from the short bruised straw; each is collected by itself, and the first is employed as straw, but the latter is used, and often without any addition of barley, as the ordinary, cheapest, and at the same time most approved fodder for horses and oxen; for which purposes its extraordinary softness gives it a decided advantage over hard chopped straw."—PARROT'S *Journey to Ararat*, pp. 65—68.

FOOD FOR HORSES, ETC.

1 KINGS iv. 28.

"(They brought) barley also and straw for the horses."

PSALM cvi. 20.

"An ox that eateth grass."

"Oats are not cultivated at all by the Arabs, the horses of this country feeding altogether upon barley and straw, the latter of which, as their grass is never made into hay, is the usual fodder in the Holy Land."—SHAW'S *Barbary*, vol. i. p. 254.

"The peasants of Syria are ignorant of the advantages of feeding their cattle with hay; they suffer the superfluous grass to wither away, and in summer and winter feed them on cut straw."—BURCKHARDT'S *Syria*, p. 246.

Neither hay nor oats are known to the Turks, nor has any nation in the East ever used them for their horses.

“TREASURES IN THE FIELD.”

JEREMIAH xli. 8.

“We have treasures in the field, of wheat, and of barley, and of oil, and of honey.”

JOEL i. 17.

“The seed is rotten under their clods, the garners are laid desolate, the barns are broken down; for the corn is withered.”

“These ‘treasures in the field’ were doubtless laid up in subterranean pits, like the *mattamores* in Barbary, in which grain is deposited when winnowed. Two or three hundred pits are sometimes together, the smallest of which will hold four hundred bushels.”—DR. SHAW.

“Near the town of Bysan (the ancient Bethshan) are the ruins of many subterranean granaries.”—IRBY AND MANGLES, p. 303.

See pp. 317, 318.

GARDENS.—IRRIGATION.

DEUTERONOMY xi. 10, 11.

“The land whither thou goest in to possess it, is not as the land of Egypt, from whence ye came out, where thou sowedst thy seed, and wateredst it with thy foot, as a garden of herbs: but the land whither ye go to possess it, is a land of hills and valleys, and drinketh water of the rain of heaven.”

PSALM i. 3.

“He shall be like a tree planted by the rivers of water, that bringeth forth his fruit in his season; his leaf also shall not wither; and whatsoever he doeth shall prosper.”

PROVERBS v. 16.

“Let thy fountains be dispersed abroad, and rivers of waters in the streets.”

xxi. 1.

“The king’s heart is in the hand of the Lord, as he rivers of water ; he turneth it whithersoever he will.”

ECCLESIASTES xii. 6.

“Or ever...the pitcher be broken at the fountain, or the wheel broken at the cistern.”

ISAIAH lviii. 11.

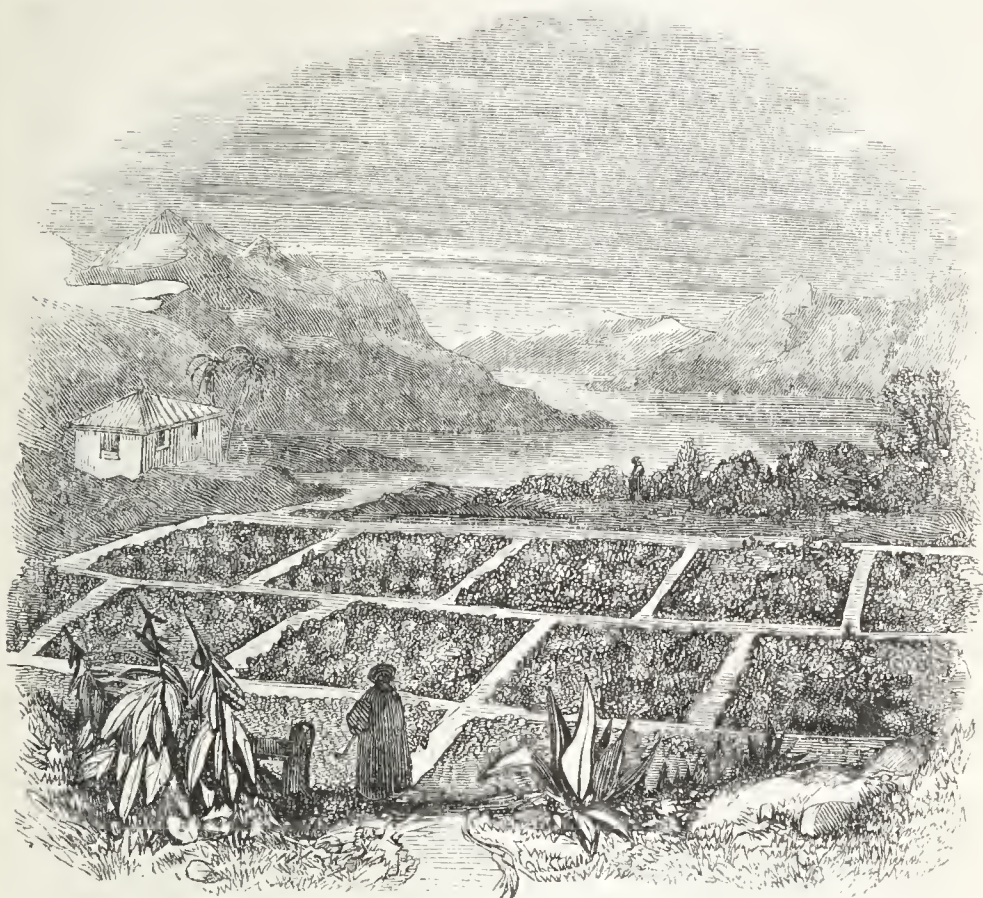
“And the Lord shall guide thee continually, and satisfy thy soul in drought, and make fat thy bones : and thou shalt be like a watered garden, and like a spring of water, whose waters fail not.”

JEREMIAH xxxi. 12.

“And their souls shall be as a watered garden ; and they shall not sorrow any more at all.”

Writing of the beautiful gardens about Jaffa, Mr. Ewald observes :—“In each of these gardens, there is a well, from which the ground is irrigated by rivulets, which are so ingeniously contrived, that a sufficient quantity of water flows round each tree and shrub to keep it in health and vigour. There is no doubt that the Psalmist alludes to such trees in his description of the servants of God. (Ps. i.) The words ‘rivers of water’ are, according to the original, *divisions* of water. The same mode of irrigating is employed on the whole of the northern coast of Africa ; and if a tree were deprived of the supply of water for any length of time, it would wither and decay.”—*Missionary Labours in Jerusalem*, pp. 29, 30.

“Several gardens were laid out with small canals intersecting them, so that streams of water might be con-



WATERED GARDENS.

ducted to the different beds when needful. These are the 'rivers of water' mentioned by the Psalmist."—*Mission to the Jews*, p. 92.

"The river that runs through the plantations of Alhennah trees (see Camphire) at Gabs, is cantoned out into a number of channels."—DR. SHAW.

"The town of Tayf is celebrated all over Arabia for its beautiful gardens. They are *watered by wells and rivulets*, which descend from the mountains. Numerous fruit-trees are found in them, grapes of a very large size and exquisite flavour, and abundance of roses. The gardens of Koba are equally beautiful. They spread over a space of four or five miles in circuit, and form a most fertile

and agreeable spot. All kinds of fruit-trees (with the exception of apple and pear, neither of which, I believe, grow in Arabia) are seen in the gardens, which are all enclosed by walls, and *watered by numerous wells*. Lemon and orange trees, pomegranates, vines, peach, apricot, fig-trees, and palm-trees, form thick groves; and many sick persons are carried there to enjoy the shade.”
—OVALLE.

Of the garden of Roda, Lord Lindsay writes:—“It is, indeed, a lovely spot. One walk, with borders of myrtle, particularly charmed me, leading between rows of orange-trees in full bearing to a fountain surrounded by cypress-trees. Rosemary edges the walk like box in England, and roses bloom in profusion, and gorgeous butterflies were flitting about in every direction. Little *canals for irrigation* are conducted all over the garden, some of them of hewn stone, others merely dug in the earth; and the water is transferred from one into the other by opening or damming it with the foot, as in Moses’ time.”—LORD LINDSAY’S *Letters from the Holy Land*, &c., vol. i. p. 56.

In Egypt there is no rain, and though the river Nile waters the country by overflowing its banks, still immense labour was required to conduct the waters of this river to many parts. Large canals had to be dug, bricks, &c. to be prepared for lining them; and for this reason, in Exod. i. 14, hard bondage in bricks and mortar is joined with other labours of the field. It must, therefore, have been glad tidings to the Israelites, that in the country whither they were going no such services would be required; for that Canaan drank of the rain of heaven, and nothing but the gardens of herbs would require to be watered by art.

“In Egypt, such vegetables as require more moisture than the inundation of the Nile affords them, are refreshed by water drawn out of the river by instruments, and lodged in large cisterns. When their melons, sugar-canes, &c., want water, they strike out the plugs that

are at the bottom of the cisterns, and the water, gushing out, is conducted to the rills in which the plantations are, by the gardener, who is always ready, as occasion requires, to stop and divert the torrent, by *turning the earth against it with his foot*, and opening, at the same time, a new trench to receive it.”—HARMER’S *Observations*, vol. i. pp. 93—96.

At Smyrna, and in many other places, water is procured for irrigating gardens in the following manner. A large wheel is fixed over the mouth of the well in a vertical position. A number of pitchers are attached to the wheel, in such a manner, that, by means of its revolution, which is effected by a horse, they are continually descending and filling, and ascending and discharging themselves.—HARTLEY.

“All crops in Persia must be artificially irrigated, as rain seldom falls there during the warm months of the year. The plains (being) nearly level, facilitates the process. Water is taken by canals from the small rivers that roll down from the mountains, and conveyed along near the foot of the declivities. Smaller canals, leading from the main ones, carry it down to prescribed sections of the plain; and these are again subdivided and conducted to particular fields, as it is needed. The openings from the main canals are readily closed, when sufficient water is taken out for a given field, and the stream then passes on to cheer and fertilize the thirsty soil of the next neighbour. The ease with which the gardener changes these streams, by opening or closing a channel, with his spade, or even with his foot, vividly illustrates the Scripture allusion to divine sovereignty. ‘The king’s heart is in the hand of the Lord, as the rivers (rivulets) of water; he turneth it whithersoever he will.’ If the fields are not level, they must be divided and worked by a spade or plough into level sections, each inclosed within a ridge a few inches high; and these divisions are successively watered.”—PERKINS’ *Residence in Persia*, p. 425.

“When the water is near at hand, the ground is often watered with pails or pots. This was formerly much done in Egypt. The *yoke* by which they bore the water pots from their shoulders, was used in carrying any sort of burthen; hence the frequent allusions to it in Scripture. One of the instruments employed in raising water is called the *shadoof*. It consists of two posts or pillars of wood, or of mud and canes or rushes, about five feet in height, and less than three apart, with a horizontal piece of wood extending from top to top, to which is suspended a slender lever, formed of a branch of a tree, having at one end a weight chiefly composed of mud, and at the other, suspended from two long palm-sticks, a vessel in the form of a bowl, made of basket-work, or of a hoop and a piece of woollen stuff or leather. With this vessel the water is thrown up to the height of about eight feet, into a trough hollowed out for its reception.” — LANE’S *Modern Egyptians*, vol. ii. p. 24.



CHAPTER V.

DESERTS, CLIMATE, ETC.

DESERTS.—SEVERAL DESCRIPTIONS OF THEM BY TRAVELLERS.—THE MIRAGE.—AFRICAN DESERT.—SALT LAND.—REFRESHING SIGHTS IN THE DESERT.—ILLUSTRATION OF PSALM lxxxiv.—CLIMATE OF PALESTINE.—EARLY AND LATTER RAINS.—SIGNS OF RAIN.—RAINY SEASON IN INDIA.—ILLUSTRATIONS OF SCRIPTURE.—HAILSTORMS.—FROST AND SNOW.—THUNDERSTORMS IN AFRICA.—AFRICAN WINDS.—WHIRLWINDS.—THE SIROCCO.—THE SIMOOM.—ILLUSTRATION OF PSALM lxxxiii. 13.—WATER-SPOUTS.—ILLUSTRATION OF PSALM xxix. 9.—MOONLIGHT.

DESERTS.

DEUTERONOMY viii. 15.

“Who led thee through that great and terrible wilderness, wherein were fiery serpents and scorpions, and drought, where there was no water.”

xxxii. 10—12.

“He found him in a desert land, and in the waste howling wilderness; he led him about, he instructed him, he kept him as the apple of his eye. As an eagle stirreth up her nest, fluttereth over her young, spreadeth abroad her wings, taketh them, beareth them on her wings; so the Lord alone did lead him.”

PSALM cvii. 4, 5.

“They wandered in the wilderness in a solitary way; they found no city to dwell in. Hungry and thirsty, their soul fainted in them.”

PROVERBS xxii. 14.

“The mouth of strange women is a deep pit: he that is abhorred of the Lord shall fall therein.”

PROVERBS xxiii. 27.

“A strange woman is a narrow pit.”

ISAIAH xxix. 8.

“It shall even be as when an hungry man dreameth, and behold, he eateth ; but he awaketh, and his soul is empty : or as when a thirsty man dreameth, and behold, he drinketh ; but he awaketh, and, behold, he is faint, and his soul hath appetite : so shall the multitude of all the nations be that fight against Mount Zion.”

xxxii. 2.

“And a man shall be as an hiding-place from the wind, and a covert from the tempest ; as rivers of water in a dry place ; as the shadow of a great rock in a weary land.”

xxxv. 6, 7.

“In the wilderness shall waters break out, and streams in the desert. And the parched ground shall become a pool,* and the thirsty land springs of water : in the habitations of dragons, where each lay, shall be grass, with reeds, and rushes.”

xli. 18, 19.

“I will open rivers in high places, and fountains in the midst of the valleys. I will make the wilderness a pool of water, and the dry land springs of water. I will plant in the wilderness the cedar, the shittah tree, and the myrtle, and the oil tree ; I will set in the desert the fir tree, and the pine, and the box-tree together.”

xliv. 3, 4.

“I will pour water upon him that is thirsty, and floods upon the dry ground ; I will pour my spirit upon thy seed, and my blessing upon thine offspring : and they shall spring up as among the grass, as willows by the water-courses.”

* Or, “And the glowing sand shall become a pool.”

JEREMIAH ii. 6.

“Neither said they, Where is the Lord that brought us up out of the land of Egypt, that led us through the wilderness, through a land of deserts and of pits; through a land of drought, and of the shadow of death; through a land that no man passed through, and where no man dwelt?”

xvii. 6.

“For he shall be like the heath in the desert, and shall not see when good cometh; but shall inhabit the parched places in the wilderness, in a salt land and not inhabited.”

REVELATION vii. 16, 17.

“They shall hunger no more, neither thirst any more; neither shall the sun light on them, nor any heat. For the Lamb which is in the midst of the throne, shall feed them, and shall lead them unto living fountains of waters: and God shall wipe away all tears from their eyes.”

“It is difficult to form a correct idea of a desert without having been in one; it is an endless plain of sand and stones, sometimes intermixed with mountains of all sizes and heights, without roads or shelter, without any sort of produce for food. The few scattered trees and shrubs of thorns, that only appear when the rainy season leaves some moisture, barely serve to feed wild animals, and a few birds. Everything is left to nature; the wandering inhabitants do not care to cultivate even these few plants, and when there is no more of them in one place, they go to another. When the trees become old, and lose their vegetation in such climates as these, the sun, which constantly beams upon them, burns and reduces them to ashes. I have seen many of them entirely burnt, their form remaining in ashes. The other smaller plants have no sooner risen out of the earth than they are dried up, and take the colour of straw...”—BELZONI'S *Travels*, p. 341.

Those only who are acquainted with the peculiarities of Eastern scenery, who have passed through sandy deserts exposed to burning suns, parched with thirst, yet unable to obtain a drop of water to assuage it, wearied with the constant glare upon the barren sands, yet looking in vain for some green spot on which to rest the eye, or for some friendly tree, or overhanging rock, beneath which they might find temporary shelter and relief,—those only who have experienced all this, can fully estimate the force and beauty of the many passages in Scripture where the metaphors of water and shade are employed.

“A man who has never toiled through burning deserts can have little idea of the rapture with which a group of trees, or a bright spot of verdure, is beheld ; or of the deep luxury of feeling excited by again moving among cottages, and fountains, and cool retreats.”

“Returning from the pyramids of Saccara,” writes Mr. Carne, “over a path of soft sand, we were parched with thirst, and would have given anything for a draught of water, when, unexpectedly, as if dropped from the clouds, a man approached us bearing an immense watermelon, which we received as manna from heaven. He had his lonely dwelling and little garden at some distance, and had purposely crossed our way with this melon, knowing he should be well paid for it.”

The same gentleman, going towards Jericho, writes :—“We entered on a tract of soft sand ; ascending a sand-hill that overlooked the plain, we saw Jericho, contrary to our hopes, at a great distance, and the level tract we must pass to arrive at it was exposed to a sultry sun, without a single tree to afford us a temporary shade. The simile of the shadow of a great rock in a weary land, was never more strongly felt.” And on another occasion, when in Egypt :—“Fatigued with heat and thirst, we came to a few cottages in a palm-wood, and stopped to drink of a fountain of delicious water. In a northern climate, no idea can be formed of the

exquisite luxury of drinking in Egypt. Little appetite for food is felt ; but when, after crossing the burning sands, you reach the rich line of woods on the brink of the Nile, and pluck the fresh limes, and mingle their juice with the soft river water,—one then perceives the beauty and force of those similes in Scripture, where the sweetest emotions of the heart are compared to the assuaging of thirst in a sultry land.”—See CARNE’S *Eastern Letters*, pp. 143, 162, 197.

Baumgarten thus describes the distress felt by himself and his companions from want of food and water while in the deserts. “Travelling all that day and night, without eating, resting, or sleeping, we could not avoid falling off our camels, while we were half-sleeping, half-waking. A thousand strange dreams and fancies came into our heads, whilst hungry and thirsty, and we sat nodding on our camels. We thought we saw somebody reaching us victuals and drink, and putting out our hands to take it, and stretching ourselves to overtake it when it seemed to draw back, we tumbled off our camels, and by a severe fall found it a dream and illusion.”

“Speaking in general of a desert, there are few springs of water, some of them at the distance of four, six, and eight days’ journey from one another, and not all of sweet water ; on the contrary, it is generally salt or bitter, so that if the thirsty traveller drinks of it, it increases his thirst, and he suffers more than before ; but when the dreadful calamity happens that the next well, which is so anxiously sought for, is found dry, the misery of such a situation cannot well be described. The camels, which afford the only means of escape, are so thirsty that they cannot proceed to another well ; and, if the travellers kill them, to extract the little liquid which remains in their stomachs, they themselves cannot advance any further. The situation must be dreadful. Many perish, victims of the most horrible thirst. It is then that the value of a cup of water is really felt.

.....If the master has none, the servant will not give it to him ; for very few are the instances where a man will voluntarily lose his life to save that of another, particularly in a caravan in the desert, where people are strangers to each other. What a situation for a man, though a rich one ; perhaps the owner of all the caravans ! He is dying for a cup of water—no one gives it to him—he offers all he possesses—no one hears him—they are all dying—though by walking a few hours further they might be saved ; the camels are lying down, and cannot be made to rise ; no one has strength to walk ; only he that has a glass of that precious liquid lives to walk a mile further, and perhaps dies too..... To be thirsty in a desert without water, exposed to the burning sun, without shelter, and no hopes of finding either, is the most terrible situation that a man can be placed in ; and, I believe, one of the greatest sufferings that a human being can endure ;—the eyes grow inflamed, the lips and tongue swell, a hollow sound is heard in the ears, which brings on deafness ; and the brain appears to grow thick and inflamed,—all these feelings arise from the want of a little water. In the midst of all this misery, the deceitful mirage appears before the traveller at no great distance, something like a lake or river of clear fresh water.....If a traveller is not undeceived, he hastens his pace to reach it sooner ; the more he advances towards it, the more it goes from him, till at last it vanishes entirely, and the deluded passenger often asks where is the water he saw at no great distance. He can scarcely believe that he was so deceived ; he protests that he saw the waves running before the wind, and the reflection of the high rocks in the water. If any one falls sick on the road, there is no alternative, he must endure the fatigue of travelling on a camel, which is troublesome even to healthy people, or he must be left behind on the sand, without any assistance, and remain so till he dies. No one remains with him—not even his old and faithful servant ; no one will stay and

die with him ; all pity his fate, but no one will be his companion. Why not stop the whole caravan till he is better, or do what they can for the best till he dies ? No, this delay cannot be ; it would put all in danger of perishing of thirst if they do not reach the next well in such a time ; besides, they all are different parties generally of merchants or travellers, who will not even wait a few hours to save the life of an individual, whether they know him or not.”—BELZONI’S *Travels*, pp. 341—343.

A traveller in the wilderness writes in one place :—“ The path winded round the side of the mountain, and to our left a *horrid chasm*, some hundred fathoms deep, presented itself to our view. It is surprising no accident befel the loaded camels.” Again he says :—“ On each side of us were perpendicular steeps some hundred fathoms deep. On every part is a wild confusion of hanging precipices, disjointed rocks, and *hideous chasms* Omnipotent Father ! to thee we trust for our deliverance from the perils that surround us. *It was through this wilderness thou didst lead thy chosen people.* It was here thou didst manifest thy signal protection, in snatching them from the jaws of destruction which opened upon every side.” In the next page, the same writer continues :—“ We came suddenly upon a *dreadful chasm* in the road, about three hundred yards long, one hundred wide, and as many deep ; and in the middle of the gulf a single column of stone raises its head to the surface of the earth.”—HARMER’S *Observations*, vol. iv. pp. 117, 118.

“ Sometimes the road led us under the shade of thick trees ; sometimes through narrow valleys, watered with fresh murmuring torrents : and then for a good while together upon the brink of a precipice. *And in all places it treated us with the prospect of plants and flowers.* Having spent about two hours in this manner, we descended into a low valley ; at the bottom of which is a fissure into the earth, of a *great depth*, but withal so nar-

row, that it is not *discernible to the eye* till you arrive just upon it, though to the *ear* notice is given of it at a great distance, by reason of the noise of a stream running down into it from the hills. We could not guess it to be less than thirty yards deep. But it is so *narrow*, that a small arch, not four yards over, lands you on its other side." May not Solomon refer to such a place as this? The flowery pleasures which abounded where this fatal pit was, make the allusion still more striking. How agreeable to *sense* the path that led to this chamber of death!—HARMER's *Observations*, vol. ii. pp. 220, 221.

"We ascended by the side of a mountain. The path was narrow and perpendicular, and much resembled a ladder. To make it worse,.....an *ignorant guide* led us astray. Here we found ourselves in a pretty situation! We were obliged to gain the heights, in order to recover the road; in performing which, we drove our poor camels up such steeps, as we had the greatest difficulty to climb after them. We were under the necessity of leaving them to themselves; as the danger of leading them through places where the least false step would have precipitated both man and beast to the unfathomable abyss below, was too critical to hazard." How precious, in such a situation, the instruction and care of the "Keeper of Israel!"—*Ibid.*, vol. iv. pp. 124, 125.

THE MIRAGE.

Bishop Lowth, in his note on Isaiah xxxv. 7, writes :—"The word is Arabic, as well as Hebrew; but it means the same in both languages, namely, the glowing sandy plain, which, in the hot countries, at a distance has the appearance of water. It sometimes tempts thirsty travellers out of their way, but deceives them when they come near, either going forward,—for it always appears at the same distance—or it quite vanishes." Dr. Clarke, in his *Travels*, has given a very lively view of this wonderful appearance. He writes:—"We arrived at the

wretched solitary village of Utko, near the muddy shore of the lake of that name.....Here we procured asses for all our party, and setting out for Rosetta, began to recross the desert, appearing like an ocean of sand, but flatter and firmer, as to its surface, than before. The Arabs, uttering their harsh guttural language, ran chattering by the side of our asses, until some of them called out 'Raschid' (Rosetta), and we perceived its domes and turrets, apparently upon the opposite side of an immense lake or sea, that covered all the intervening space between us and the city. Not having in my own mind, at the time, any doubt as to the certainty of its being water, and seeing the tall minarets and buildings of Rosetta, with all its groves of dates and sycamores, as perfectly reflected by it as by a mirror, insomuch that even the minutest detail of the architecture, and the trees, might have been thence delineated, I applied to the Arabs to be informed in what manner we were to pass the water. Our interpreter, although a Greek, and therefore likely to have been informed of such a spectacle, was as fully convinced as any of us that we were drawing near to the water's edge, and became indignant when the Arabs maintained that within an hour we should reach Rosetta by crossing the sands in the direct line we then pursued, and that there was no water. 'What!' said he, giving way to his impatience, 'do you suppose me an idiot, to be persuaded contrary to the evidence of my senses?' The Arabs, smiling, soon pacified him, and completely astonished the whole party, by desiring us to look back at the desert we had already passed, where we beheld a precisely similar appearance. It was, in fact, the mirage—a prodigy to which every one of us were then strangers, although it afterwards became more familiar."

Isaiah therefore declares, that in those happy days of which he was speaking, there should be no more this deception to distress the thirsty wanderer—in that time when the wilderness and the solitary place should be

glad, the glowing sand also should *really become a pool* of water.

AFRICAN DESERT.

“Our road was all the way in an open plain, bounded by hillocks of sand and fine gravel, perfectly hard. About twelve miles distant there is a ridge of mountains of considerable height, perhaps the most barren in the world. Between these our road lay through plains three miles broad, but without trees, shrubs, or herbs. There are not even the traces of any living creature, neither serpent nor lizard, antelope nor ostrich, the usual inhabitants of the most dreary deserts. There is no sort of water on the surface, brackish or sweet. Even the birds seemed to avoid the place as pestilential, not having seen one of any kind so much as flying over. The sun was burning hot ; and upon rubbing two sticks together, in half a minute they both took fire and flamed : a mark how near the country was reduced to a general conflagration.”—BRUCE'S *Travels*.

SALT LAND.

“We passed over a plain of about four miles in length, covered with thick, hard salt, resembling in appearance sheets of firmly frozen snow ; the surface bore the weight of our animals without giving way in the least.”

REFRESHING SIGHTS IN THE DESERT.

In the Rev. J. N. Allen's “Diary of a March through Sinde and Affghanistan,” during the late unhappy war, there is this passage :—“We entered the (Bolan) pass, and crossed again and again a small stream, called the Bolan River, which ran its winding course of shallow limpid water over large pebbles. Most refreshing it was after the arid desert through which I had passed, to see and hear it, and to gaze on the sedges and grass which

grew on its banks ! Months had passed since I had seen anything so pleasing. The sun by this time had risen and was rather oppressive, when suddenly, turning an angle, we came under the broad shade of the rock that bounded the gorge. Under this we rode for some time, and found it peculiarly grateful. I could not forbear remarking to a companion near me the beautiful illustration we had had during our march of the force of the Scripture metaphor, ‘As rivers of water in a dry place, as the shadow of a great rock in a weary land.’”—REV. J. N. ALLEN’S *Diary, &c.*, pp. 104, 105.

“In contrast to the evil, there is the luxury of the desert, and also its sport, which is generally at the well ; there one enjoys the delight of drinking as much water as one likes, which tastes not unlike cordials or other precious liquors. The beasts, mixed with birds, drink together close to the well. There is a kind of basin made of clay, which is filled up by the drivers from the well, where the thirsty animals all drink together, camels, sheep, dogs, donkeys, and birds, as it is the only time they can partake of that liquid ; for, in some places, if it is not drawn up from the well, they cannot reach it...The damsels...come as shepherdesses to water their flocks.”—BELZONI’S *Travels*, p. 344.

“...We saw at a distance a range of hills...part of the hills of Seir. After wandering so many days in the wilderness, with its vast monotonous plains of level sand, the sight of these distant mountains was a pleasant relief to the eye, and we thought we could understand a little of the feeling with which Moses, after being forty years in the desert, would pray,—‘I pray thee, let me go over and see the good land that is beyond Jordan—that goodly mountain, and Lebanon.’

“After riding ten hours,...we cast ourselves down, wearied and sleepy, upon our mats, under the shelter of the coverlets thrown over us, and tried to find a little rest under a scorching sun and upon glowing sand. It was easy now to understand the murmurings of the chil-

dren of Israel in the desert ; for heat, thirst, and a long journey over burning sands, made us experience feelings of misery which we had not known before.....

“The heat was very oppressive. Even the Bedouins begged us to lend them handkerchiefs to shield their faces from the rays of the sun ; and often ran before, and threw themselves beneath a bush to find shelter for a few minutes. How full of meaning did the word of the prophet appear, ‘There shall be a tabernacle for a shadow in the day-time from the heat.’ And again, ‘A man shall be as the shadow of a great rock in a weary land.’”—*Narrative of Mission of Inquiry to the Jews*, pp. 65, 85.

“A complete hurricane of wind blew the small dry sand full in our faces for about an hour. It was in vain to attempt putting up the tent, so that we were forced to shelter ourselves from the combined heat and storm of the sirocco by wrapping ourselves in our carpets, and lying on our faces at the roots of some large sycamore-trees till it abated. We thought of Isaiah, ‘A man shall be as an hiding-place from the wind, and a covert from the tempest ;’ and ‘a refuge from the storm, a shadow from the heat, when the blast of the terrible ones is as a storm against the wall.’”—*Ibid.*, p. 96, 97.

“The description of the joyful state of the redeemed given in the Apocalypse, seems to be formed in reference to such a life as this. There shall be no more hunger, thirst, nor burning sun, but green shady pastures, and living fountains of water, and the Lamb shall dwell as in a tent among them. And all this because they have reached the promised inheritance,—their desert life has ended, and the promised land begun.”—*Ibid.*, p. 88.

ILLUSTRATION OF PSALM LXXXIV. 5—7.

“Blessed is the man whose strength is in thee ; in whose heart are the ways of them : Who passing through the valley of Baca *make it a well* ; the rain also *filleth the pools*.

“They go from *strength to strength*, every one of them in Zion appeareth before God.”

In consequence of the distress which is felt by travellers in the East for want of water, wells are frequently made expressly for them ; and more especially for those who travel for devotional purposes.

Thus the Mohammedans have *dug wells* in the deserts for those who travel to Mecca, their sacred city, to stop at, and drink ; the scarcity of water being sometimes so great during the pilgrimage, that a small skin of water is sold for *one shilling*, a large price among the Arabs. These wells are often made at regular distances, so as to form stations, and they are repeatedly mentioned by Burckhardt. The following are some of the passages in his work which relate to them :—

“After three hours’ march we entered a hilly country, where a coffee-hut stands near a *well*. We continued in a broad and winding *valley* among these hills, some sandy, and some rocky, and at the end of five hours and a half, stopped for a short time at the *well* called ——

“We passed a *large tank*, built of stones, which in the time of the *pilgrimage* is filled with water from the canal. An historian says, there were formerly *sixteen wells* between the city of Muna and Mecca.

“We entered upon sandy ground in a *valley*, where are some *wells*.

“We passed a cluster of huts, with *wells of very good water*. It being a cloudy and dark night, we lost our way in following the windings of a *valley*, and being unable to regain the right road we lay down on the sand, and slept till day-break.” The same writer, speaking of the road pursued by the pilgrims from Syria, says :—“At every watering-place are a small castle and a *large tank* at which the camels water. Water is plentiful on the route ; the *stations* are nowhere more distant than eleven or twelve hours’ march ; and, in

winter, *pools of rain-water* are frequently found." In another place he writes :—"We passed a ruined building, where a *well*, now filled up, formerly supplied the passenger with water. The plain is here overgrown with some trees and thick shrubs. We continued to cross it till six hours, where it closes, and the road begins to ascend slightly through a broad *woody valley*. Here is situated a *large deep well*, lined with stone, with a spring of good water in the bottom. This is a *station* of the pilgrimage.

"Here are many tanks, cased with stone, constructed to supply the pilgrims with water."

"At all these stations small castles have been built, close to the basons in which the rain-water is collected."

These extracts may almost serve as comments upon David's words in the eighty-fourth Psalm. The valley of Baca is very likely the same with that of Rephaim, (see 2 Sam. v. 22—24,) in which were large shrubs, rendered, in our translation, mulberry-trees, but which the Arabs still call Baca. This valley, lying west of Jerusalem, the pious Israelites journeying thither had to pass. Here, therefore, they had made them *wells*, to facilitate their progress. God also sent them rain from heaven, which filled the *pools* (or reservoirs), and thus they were enabled to go on from *strength to strength*, from *one* place of refreshment to another, till before the God of gods they every one of them appeared in *Zion*. —See HARMER.

CLIMATE, &c.

GENESIS xxxi. 40.

"In the day the drought consumed me, and the frost by night."

EXODUS ix. 23—25.

"And Moses stretched forth his rod toward heaven ; and the Lord sent thunder and hail, and the fire ran

along the ground ; and the Lord rained hail upon the land of Egypt. So there was hail, and fire mingled with the hail, very grievous.....And the hail smote throughout all the land of Egypt all that was in the field, both man and beast ; and the hail smote every herb of the field, and brake every tree of the field.”—See PSALM cv. 32 ; lxxviii. 47, 48.

DEUTERONOMY xi. 13, 14.

“If you shall hearken diligently unto my commandments...I will give you the rain of your land in his due season, the first rain, and the latter rain.”

JOSHUA x. 11.

“The Lord cast down great stones from heaven upon them unto Azekah, and they died : they were more which died with hail-stones, than they whom the children of Israel slew with the sword.”

2 SAMUEL xxiii. 4.

“He shall be as the light of the morning when the sun riseth, even a morning without clouds.”

1 KINGS xviii. 44, 45.

“And it came to pass at the seventh time, that he said, Behold, there ariseth a little cloud out of the sea, like a man’s hand. And he said, Go up, say unto Ahab, Prepare thy chariot, and get thee down, that the rain stop thee not. And it came to pass in the mean while, that the heaven was black with clouds and wind, and there was a great rain.”

xix. 11.

“And he said, Go forth, and stand upon the mount before the Lord. And behold, the Lord passed by, and a great and strong wind rent the mountains, and brake in pieces the rocks before the Lord.”

2 KINGS ii. 11.

“And Elijah went up by a whirlwind into heaven.”

2 KINGS iii. 17.

“Ye shall not see wind, neither shall ye see rain.”

xix. 26.

“They were...as corn blasted before it be grown up.”

JOB xxix. 2, 4, 19, 20.

“Oh that I were as in months past, as in the days when God preserved me;...as I was in the days of my youth! (rather, of my *winter*.)...My root was spread out by the waters, and the dew lay all night upon my branch; my glory was fresh in me.”

xl. 9.

“Hast thou an arm like God? or canst thou thunder with a voice like him?”

PSALM xix. 2.

“Day unto day uttereth speech (or, *pours out* speech).”

xxix. 3, 9.

“The voice of the Lord is upon the water; the God of glory thundereth. The voice of the Lord discovereth the forests (the thick bushes, Prayer-book version).” (See whole Psalm.)

xxxii. 4.

“My moisture is turned into the drought of summer.”

xlii. 7.

“Deep calleth unto deep at the noise of thy water-spouts.”

lxxii. 6.

“He shall come down like rain upon the mown grass, as showers that water the earth.”

lxxxiii. 13.

“O, my God, make them like a wheel; as the stubble before the wind.” [ISAIAH xvii. 13; xl. 24.]

PSALM ciii. 16.

“The wind passeth over it (the grass), and it is gone.”

cxxi. 6.

“The sun shall not smite thee by day, nor the moon by night.”

cxlvi. 16, 17.

“He giveth snow like wool, he scattereth the hoarfrost like ashes; he casteth forth his ice like morsels: who can stand before his cold?” (See EZRA x. 9; MATT. xxiv. 20.)

PROVERBS i. 27.

“When your destruction cometh as a whirlwind.” (x. 25.)

xvi. 15.

“(The King’s favour) is as a cloud of the latter rains.”

xxv. 14.

“Whoso boasteth himself of a false gift, (*i.e.* pretends that he will bestow a gift, and does not do so,) is like clouds and wind without rain.”

ECCLESIASTES xi. 4.

“He that observeth the wind shall not sow, and he that regardeth the clouds shall not reap.”

ISAIAH xxi. 1.

“As whirlwinds in the south pass through, so it cometh from the desert, from a terrible land.”

xxv. 5.

“Thou shalt bring down the noise of strangers, as the heat in a dry place; even the heat with the shadow of a cloud.”

xxvii. 8.

“He stayeth his rough wind in the day of the east wind.”

ISAIAH xxxvii. 36.

“The angel (messenger or agent) of the Lord went forth, and smote in the camp of the Assyrians an hundred, fourscore, and five thousand.”

lxvi. 15.

“Behold, the Lord will come with fire, and with his chariots like a whirlwind, to render his anger with fury, and his rebuke with flames of fire.”

JEREMIAH x. 13.

“When he uttereth his voice, there is a multitude (or *noise*) of waters in the heavens, and he causeth the vapours to ascend from the ends of the earth; he maketh lightnings with (or, *for the*) rain, and bringeth forth the wind out of his treasures.” [Ps. cxxxv. 7.]

HOSEA vi. 3.

“He shall come unto us as the rain, as the latter and former rain unto the earth.”

viii. 7.

“They have sown the wind, and they shall reap the whirlwind.”

x. 12.

“It is time to seek the Lord, till he come and rain righteousness upon you.”

JOEL ii. 23.

“Be glad, then, ye children of Zion, and rejoice in the Lord your God; for he hath given you the former rain moderately, and he will cause to come down for you the rain, the former rain, and the latter rain.”

AMOS iv. 7.

“Also I have withholden the rain from you, when there were yet three months to the harvest.”

NAHUM i. 3.

“The Lord hath his way in the whirlwind and in the storm, and the clouds are the dust of his feet.”

ZECHARIAH ix. 14.

“And the Lord shall be seen over them, and his arrow shall go forth as the lightning : and the Lord God shall blow the trumpet, and shall go with whirlwinds of the south.”

MATTHEW vii. 27.

“But the men marvelled, saying, What manner of man is this, that even the winds and the sea obey him ?”

xxiv. 27.

“As the lightning cometh out of the east, and shineth even unto the west, so shall also the coming of the Son of Man be.”

LUKE vi. 49.

“But he that heareth, and doeth not, is like a man that without a foundation built an house upon the earth; against which the stream did beat vehemently, and immediately it fell; and the ruin of that house was great.”

xiii. 54—56.

“When ye see a cloud rise out of the west, straightway ye say, There cometh a shower; and so it is. And when ye see the south wind blow, ye say, There will be heat; and it cometh to pass. Ye hypocrites, ye can discern the face of the sky and of the earth; but how is it that ye do not discern this time?”

REVELATION xvi. 17, 18.

“And the seventh angel poured out his vial into the air...and there were voices, and thunders, and lightnings.”

“The variations of rain and sunshine, which in the West exist throughout the whole year, are in Palestine

confined chiefly to the latter part of autumn and winter, while the remaining months enjoy almost uninterruptedly a cloudless sky.

“The autumnal rains, the early rains of Scripture, usually commence in the latter half of October or beginning of November ; not suddenly, but by degrees ; which gives opportunity to the husbandman to sow his seeds of wheat and barley. The rains come mostly from the west or south-west, continuing for two or three days at a time, and falling especially during the nights. Then the wind chops round to the north or east, and several days of fine weather succeed. During the months of November and December, the rains continue to fall heavily ; afterwards they return only at longer intervals, and are less heavy ; but at no period during the winter do they entirely cease to occur. Snow often falls in Jerusalem, in January and February, to the depth of a foot or more ; but does not usually lie long. The ground never freezes ; but Mr. Whiting had seen the pool* at the back of his house covered with thin ice for one or two days.

“Rain continues to fall more or less throughout the month of March, but is rare after that period. Nor are there at the present day any particular periods of rain, or succession of showers, which might be regarded as distinct rainy seasons. The whole period from October to March now constitutes only one continued season of rain, without any regularly intervening term of prolonged fair weather. Unless, therefore, there has been some change in the climate since the times of the New Testament, the early and the latter rains, for which the husbandman waited with longing, seem rather to have implied the first showers of autumn, which revived the parched and thirsty earth, and prepared it for the seed ; and the later showers of spring, which continued to refresh and forward both the ripening crops and the vernal products of the fields.

* Hezekiah's Pool.

“During the whole winter the roads, or rather tracks, in Palestine, are muddy, deep, and slippery; so that the traveller at this season is subjected to the utmost discomfort and inconvenience. When the rains cease, the mud soon disappears, and the roads become hard, though never smooth. Whoever, therefore, wishes to profit most by a journey in Palestine, will take care not to arrive in Jerusalem earlier than the latter part of March. During the months of April and May, the sky is usually serene, the air mild and balmy, and the face of nature, after seasons of ordinary rain, still green and pleasant to the eye. Showers occur occasionally; but they are mild and refreshing. On the first of May we experienced showers in the city; and at evening there was thunder and lightning (which are frequent in the winter), with pleasant and reviving rain. The 6th of May was also remarkable for thunder and for several showers, some of which were quite heavy. The rains of both these days extended far to the north, and overtook our missionary friends, who were returning from Jerusalem to Beirût. But the occurrence of rain so late in the season was regarded as a very unusual circumstance. Morning mists, however, are occasionally seen at a still later period.

“In ordinary seasons, from the cessation of the showers in spring until their commencement in October or November, rain never falls, and the sky is usually serene. If during the winter there has been a sufficiency of rain, the husbandman is certain of his crop; and is also sure of fine weather for the ingathering of the harvest. The high elevation of Jerusalem secures it the privilege of a pure atmosphere; nor does the heat of summer ever become oppressive, except during the occasional prevalence of the *south wind*, or *sirocco*. (During our sojourn there, from April to June, we did not find the heat burdensome, and the air was fine.) The nights are uniformly cool, often with a heavy dew; and our friends had never had occasion to dispense with

a coverlet upon their beds during summer. Yet the total absence of rain soon destroys the verdure of their fields, and gives to the whole landscape the aspect of drought and barrenness. The only green thing which remains is the foliage of the scattered fruit trees, and occasional vineyards and fields of millet. The deep green of the broad fig-leaves and of the millet is delightful to the eye in the midst of the general aridness.

“In autumn the whole land has become dry and parched; the cisterns are nearly empty; the few streams and fountains fail; and all nature, physical, and animal, looks forward with longing to the return of the rainy season. Mists and clouds begin to make their appearance, and showers occasionally to fall; the husbandman sows his seed, and the thirsty earth is soon drenched with an abundance of rain.”—ROBINSON’S *Researches*, vol. ii. pp. 96—100.

Where the rain falls, as it does with us, there is no notion of early and latter rains; but nothing is more natural than this distinction in such a country as Palestine, where the summer’s drought is terminated by heavy showers, continuing some days; after which there is an interval of fine weather, and then showers fall again; and these probably are the *latter* rains mentioned in Scripture. The *early*, or *former* rains in the Holy Land fall about the middle of October, or the beginning of November—the latter rains in April. If the latter rains fall in the middle of April, (says Dr. Shaw,) the crop is reckoned secure.

Besides the rains of April, there are also those of the beginning of February, and to these latter the prophet Amos appears to allude. From them are derived the hopes of a plentiful year, for “It is an observation,” writes Dr. Shaw, “at or near Jerusalem, that provided a moderate quantity of snow (or rain) falls in the beginning of February, and the fountains overflow a little afterwards, there is the prospect of a fruitful and plentiful

year : the inhabitants making, upon these occasions, the like rejoicing with the Egyptians upon the overflowing of the Nile."

The harvest at Aleppo in Syria follows in *three months* after these rains of February, the withholding of which the prophet speaks of as a signal judgment; and he declares further, that the rain was suspended not only to punish them with want of bread, but with thirst also; for, in these countries, excepting a few fountains, they have only cistern water, so that if God in anger suspended the rains, there was more danger of perishing by thirst, than by famine. On the other hand, God promises to give the former and latter rains to his obedient children, as the greatest of *temporal* blessings, "that ye may gather in your corn, and your wine, and your oil; that ye may eat and be full." (Deut. xi. 14.) He even likens the blessings of his grace to this blessing of his providence, assuring his people that if they would seek his face he would come unto them as the "*latter and former rain unto the earth.*"

Though the returns of rain in the Holy Land are not extremely frequent, yet when it does rain, the water is wont to pour down with great violence three or four days and nights together, enough to drown the whole country. Such violent rains, in a hilly country especially, like Judæa, must occasion inundations very dangerous to buildings that happen to be placed within their reach by washing away the soil from under them, and occasioning their fall. The violent rains at Aleppo in Syria often wash down stone walls; and in the Castravan mountains, a hamlet, with fig-garden, &c., was suddenly removed to a great distance. Maundrell actually saw the tracts of several torrents down the side of the hills of the Holy Land. He also describes that country as extremely hilly, but as covered frequently with a thin coat of earth, circumstances which complete the illustration of our Saviour's words, and teach us how to understand building on the sand, or loose soil; and the wise

man's digging down to the rock before he laid his foundation.

The Hebrew word rendered *youth* in Job xxix. 2, might also be rendered *winter*; and seems rather to mean, the *wet season*; for, as the summers of the Holy Land are perfectly dry, its winters are wet. Job refers to the days of his *moist time*, not to the days of his disgrace, the days in which he was stripped of his ornaments, as an herb of its leaves and flowers in winter; but when he was like a plant in the latter part of the rainy season, (before the violent heats and drought of summer scorched and burnt up everything,) green and flourishing.

Rain in the East is often preceded by squalls of wind, which take up such quantities of sand from the desert as quite *darken the sky*. In Aleppo seldom a night passes during September without much lightning in the north-west quarter, but not attended with thunder. When this lightning appears in the west, or south-west, it is accompanied with thunder, and is a *sure sign* of approaching *rain*. Thus does God make lightnings for the rain; the squalls of wind bring on these refreshing showers, and are therefore called precious things of the *treasuries* of God; and when he thunders, it is the *noise of waters* in the heavens. With respect to the cloud Elijah saw, it is mentioned by Mr. Bruce in his *Travels*, when he says, "Every morning, about nine, a small cloud, not above four feet broad, appears in the East, whirling violently round, as if upon an axis; but when arrived nearly over head, it first abates its motion, then loses its form, and extends itself greatly, and seems to call up vapours from all opposite quarters. These clouds having attained nearly the same height, rush against each other with great violence, and put me always in mind of Elijah foretelling rain on Mount Carmel."

A clergyman in Suffolk "saw a cloud *like a man's* hand on a high hill at Beachborough, in Kent, and immediately a violent shower followed."

Dr. Adam Clarke writes, "I have often seen this repeated several times a day in the English Channel. A cloud, about the *size of a man's hand*, first appeared ; this gradually increased till the whole heavens were *robed in black*, and a *dreadful storm* ensued. When all again seemed comparatively clear, the appearance of the *hand-like cloud* was the *sure forerunner* of another storm."

Ploughing and sowing were sometimes practised in the East in expectation of rain. It was therefore natural for the labourer to wait till he saw the signs of its approach, particularly the blowing of the wind that was wont to bring it. (ECCLES. xi. 4.) See HARMER'S *Observations*, vol. i.

RAINY SEASON IN INDIA.

"It now rarely ever rains before the 1st of July. The rains generally commence with a thunder-storm. The night previous, perhaps, not a breath of air is stirring ; all nature appears to be exhausted and dead. But scarcely has the first shower fallen, when every living creature seems to be revived. Thousands of frogs at once raise their voices, and their croaking is terrible. Every tank and almost every pool, is filled with small fishes. There is a tank or pond adjoining the Mission premises, which is annually ploughed and sown, in the cold season ; yet after the rains have filled it, we generally obtain a large quantity of fish.

"The flies and mosquitoes are troublesome at all times ; but at the beginning of the rains they are extremely so. To these may be added the different kinds of ants which now take wing. These, and more especially the white ants, enter the rooms, not by hundreds but by thousands.

"The rain, however, does not fall without intermission ; we have some fine days between : but when it rains, it pours down in torrents, and continues to do so for days together. In consequence of this, many houses

in Benares fall in, and many lives are annually lost. The thunder-storms during the rainy season are awfully grand. There is often a constant roar of thunder between the heavy peals. The sheet-lightning is excessively vivid, frequently without intermission, and intermingled with forked lightning. We are forcibly reminded of the Psalmist's words: 'The clouds poured out water: the skies sent out a sound: thine arrows also went abroad. The voice of thy thunder was in the heaven: the lightnings lightened the world: the earth trembled and shock.'"—*Recollections of an Indian Missionary*, pp. 8, 9.

ILLUSTRATIONS OF SCRIPTURE.

"The evening was beautiful. Indeed, morning and evening have here, day after day, a brilliance such as we never see more than once or twice in a year at home. The flood of light that pours out of the clear, unclouded skies, reminds us of the last words of David, where he compares the reigning of the coming Saviour to 'a morning without clouds,' and also of the language of the Psalmist, 'Day unto day *pours out* speech.'

"We frequently experienced an interesting illustration of a passage in the prophet Isaiah. About mid-day, when the heat was very oppressive, a small cloud, scarcely observable by the eye, passed over the disk of the burning sun. Immediately the intense heat abated, a gentle breeze sprung up, and we felt refreshed. 'Thou shalt bring down the noise of strangers (enemies) as the heat in a dry place (a sandy desert), even the heat *with the shadow of a cloud*; the branch (the palm-branch waved in supposed triumph) of the terrible ones shall be brought low.' The immediate relief afforded us by the interposition of a small and almost imperceptible cloud taught us the lesson of the prophet. With what divine ease and speed God can relieve his suffering church, and bring low her proudest enemies!"—*Narrative*, &c. p. 76.

The spring and summer nights are so cold in the Holy Land, that fires are occasionally necessary, even in May; which accounts for the people who went to Gethsemane to apprehend our Lord, making a fire of coals at the time of the passover, earlier in the year than May. A traveller mentions sitting by a fire in a little ruined building somewhere in Galilee, on the night of May 8th; and in May, June, and even July, furred garments are frequently worn in the evenings by travellers in the East. It is also very common for days intensely hot, to be followed by as cold nights. Mr. Biddulph, chaplain to the English factory at Aleppo, expressed surprise at finding the weather so warm at Jerusalem, at that same time of the year that he was there, when those that had been out in the night to seize our Lord wanted a fire. It seemed strange to him that Peter should have crept to the fire, when he could not endure the heat of the sun. But after being there a few days, and feeling the changes from heat to cold which constantly occur, his wonder ceased. Another traveller, passing through Mesopotamia (where Jacob was) found the heat so oppressive, that though he wore upon his head a great black handkerchief, after the manner of Eastern travellers, yet his forehead was so scorched as to swell exceedingly, and the skin came off. His hands, too, were continually scorched. Another records that having travelled in Arabia and Mesopotamia, both in winter and summer, he had found the truth of what the patriarch said, that in the day he was scorched with heat, and stiffened with cold in the night.

HAIL-STORMS.

“On the 8th of February commenced the most violent thunder and hail-storm ever remembered, and which continued two days and nights intermittingly. The hail, or, rather, the ice-stones, were as big as large walnuts.”—*History of the Expedition to Egypt.*



Diodorus Siculus mentions a storm of hail which occurred at Rhodes in the spring of the year B. c. 316, when the hail-stones were upwards of a pound in weight, and the houses were thrown down by them.

FROST AND SNOW.

The frost and snow are, in some winters, very severe in Jerusalem and other parts of Judea, and rain and snow fall sometimes in great quantities. When King Richard was approaching Jerusalem with his army in the winter (during his war against the Saracens), we read that "Most heavy rains fell, and the air was very severe, so that very many of their beasts perished; that the rains, storms of hail, and winds, were so vehement, that the stakes of their tents were torn up, and carried to a distance; and that by the extremity of the cold and wet their horses perished, and the greater part of their food was spoiled." The snow in some Eastern countries

falls in flakes as big as walnuts, and in the mountainous districts of Arabia by the Dead Sea, there have been dreadful storms of hail, snow, and rain, and also quantities of ice ; so that David might well say : “ he giveth his snow like wool, he scattereth the hoar-frost like ashes ; he casteth forth his ice like morsels : who can stand before his cold ? ”

In an ancient account of the defeat of some Turkish troops in the neighbourhood of Askalon, during the winter, it is said : “ They for haste threw away their armour and clothes, but so sunk under the cold, with want of food, tediousness of the ways, and greatness of the fatigue, that they were daily taken captives in the woods, mountains, and wilderness, and sometimes threw themselves in the way of their enemies, rather than perish through cold and want.” What a striking comment upon our Saviour’s words, “ Pray ye that your flight be not in the *winter* ! ”—HARMER’S *Observations*, vol. i. pp. 111–114, note, 119, 120.

ILLUSTRATION OF EZEKIEL xxxiii. 30.

“ The children of thy people still are talking against (rather *concerning*) thee, by the walls, and in the doors of the houses.”

Severe, however, as the cold is in these countries, yet, even in the depth of winter, when the sun is out, and there is no wind, it is always warm in the open air, and the people enjoy it ; spending their holidays in sauntering about, sitting under walls in winter, and under shady trees in summer ; while the better sort of Eastern houses have porches or gateways, with benches on each side, where the master of the family receives visits, and transacts business ; and, as it was winter, the tenth month, answering to the latter end of December, when the Israelites talked about Ezekiel, they sat under the walls for the benefit of the sun, rather than under trees to avoid its heat ; while the

richer among them sat in their porches, or gateways, in one of which an English traveller found a distinguished person sitting (in Egypt), the 29th or 30th of December. —HARMER'S *Observations*, vol. i. pp. 120–122.

THUNDERSTORMS IN AFRICA.

“The boisterous winds in Africa are followed by terrific thunderstorms. These often commence with a small cloud, increasing into mountains of snow, with a tinge of yellow. They are preceded by a dead stillness, which continues till the tornado bursts with awful violence, and the clouds have discharged their watery treasures. In such a case there are almost always two strata of clouds, frequently moving in opposite directions. The higher mountain-like masses going one way, while the loose misty vapour beneath, rolling in fearful velocity, is going another; while the peals of thunder are such as to make the very earth tremble. The lightning is of three descriptions: one kind passing from cloud to cloud; this is seldom accompanied with any rain. Another kind is the forked, which may be seen passing through a cloud and striking the earth; this is considered the most dangerous. The most common is what we are in the habit of calling stream or chain lightning. This appears to rise from the earth, in figures of various shapes, crooked, zigzag, and oblique, and sometimes like a waterspout at sea; it continues several minutes, while the observer can distinctly see it dissolve in pieces, like a broken chain. The perpetual roar of awful thunder on these occasions may be conceived, when twenty or more of these flashes may be counted in a minute. The lightning may also be seen passing upwards through the dense mass of vapour, and branching out like the limbs of a naked tree in the blue sky above. In such storms the rain frequently falls in torrents, and runs off very rapidly; not moistening the earth, except in sandy plains, more than six inches deep.

“ These storms are frequently very destructive : people are killed, especially such as take refuge under trees ; horses are struck, game are frequently killed, and I have known about fifty head of cattle levelled on the spot. They frequently produce great terror, especially among animals. The antelopes flee in consternation ; and I have had opportunities of observing the poor Bechuanas start off early on the morning following such a storm in quest of the young who have been cast through terror : thus illustrating the words of the Psalmist. ‘ The voice of the Lord causeth the hinds to calve.’ ”—MOFFAT’S *Missionary Labours in Southern Africa*, pp. 335—337.

AFRICAN WINDS.

Speaking of the climate of Africa, Mr. Moffat remarks the prevalence of north winds, which may “ with great propriety be styled sandy monsoons.” They are so dry as to affect the skin very disagreeably, and the atmosphere appears as if dense with smoke. “ Towards the latter end of the windy season, the thirsty cattle may frequently be seen turning their heads northward, to snuff the aqueous blast, as their instinctive powers catch the scent of the green herbage which is brought from the tropical regions. When this is the case, there is reason to hope that clouds will soon make their appearance from the opposite quarter. The wind is rarely from the east, and when it is, we expect rain. The instinct of cattle under these circumstances is very remarkable, and sometimes leads to serious consequences. I have known these animals, after having travelled nearly two hundred miles from their country, when passing through one more sterile and dry, eagerly snuff the odoriferous gale blowing from the luxuriant plains they had left, and start in a straight line to the place from whence they had come. (On one occasion) Africamer lost the greater part of his cattle from this cause. One evening a strong wind commenced blowing from the

north ; it smelt of green grass, as the natives expressed it. The cattle, not being in folds, started off after dark. The circumstance being unprecedented, it was supposed they had merely wandered out to the common where they were accustomed to graze ; but it was found, after much search, that some thousands of cattle had directed their course to the north. A few were recovered ; but the majority escaped, after having been pursued hundreds of miles. This instinct directs the migrations of the antelope and the wild ass used to the wilderness, that snuffeth up the wind at her pleasure. These winds come from within the tropics, where rain has fallen, and the cool air thereby produced, rushes southward over the plains. The more boisterous these winds are, the more reason we have to expect rain.”—MOFFAT’S *Missionary Labours*, &c., pp. 333—335.

THE SIROCCO.

Dr. Robinson thus describes the tempest called *sirocco*: —“The wind had been all the morning north-east ; but at 11 o’clock it suddenly changed to the south, and came upon us with violence and intense heat, until it blew a perfect tempest. The atmosphere was filled with fine particles of sand, forming a bluish haze ; the sun was scarcely visible, his disk exhibiting only a dun and sickly hue ; and the glow of the wind came upon our faces as from a burning oven ; often we could not see ten rods around us, and our eyes, ears, mouths, and clothes were filled with sand.”

The *sirocco* resembles the wind called *Khamsîn* in Egypt. “The *simoom*,” the Arabs say, “differs from it only in its greater heat ; the haze, and sand, and discoloration of the air being alike in both. Should it overtake a traveller without water, it may, in certain circumstances, prove fatal to him. He needs water not only to drink, but it is well to wash the skin. The *simoom*, they said, prevails only during the season when the

Khamsîn blows in Egypt. This is during the months of April and May."

"The tempest," continues Dr. Robinson, in his account of the sirocco, "now seemed to have reached its greatest fury, and had become a tornado. It was with the utmost difficulty that we could pitch our tent or keep it upright after it was pitched. For a time the prospect was dreadful, and the storm in itself was probably as terrific as most of those which have given rise to the exaggerated accounts of travellers. Yet here was no danger of life; though I can well conceive that in certain circumstances, as where a traveller is without water, and is previously feeble and exhausted, such a '*horrible tempest*' may well prove fatal. Most of our Arabs covered their faces with a handkerchief, although we were travelling before the wind. After five o'clock the wind fell, the air became less obscure; a breeze sprang up from the north-west, which soon purified the atmosphere, restored the sun to his splendour, and brought us a clear and pleasant evening. It was no little labour to free ourselves from the casing of sand in which we were enveloped."—ROBINSON'S *Researches*, vol. i. pp. 287–289, 305.

THE SIMOOM.

Whirlwinds *usually* arise from the south, and the more southern countries in the East are most liable to them. A traveller, giving an account of the danger there is of losing one's way in the deserts between Egypt and Nubia, writes, "It is infinitely greater when the *south* wind blows." It dries up the goat-skins filled with water, stifles on the spot those who breathe in it; so that to guard against its effects, they are obliged to throw themselves on the ground instantly, with their face close to the burning sands, and to cover their heads with some cloth or carpet, lest they should breathe the wind, and perish.

Sometimes, too, it raises up large quantities of sand

with a whirling motion, which, darkening the eye, renders it impossible for the guides to perceive the way, so that whole caravans have been buried beneath it. The camels alone give notice of its approach, by making a noise, and burying their mouth and nostrils in the sand, and whoever imitates them escapes destruction. Mr. Bruce thus describes this pestilential wind, which is called "The Simoom." "We had no sooner got into the plains, than we felt great symptoms of the simoom, and about a quarter before twelve, our prisoner first, and then Idris, called out 'The Simoom ! the Simoom !' My curiosity made me look behind me ; about *due south*, a little to the east, I saw the coloured haze as before. It seemed now to be rather less compressed, and to have with it a shade of blue : the edges of it were like a very thin smoke. We all fell on our faces, and the simoom passed with a gentle ruffling wind. It continued to blow thus till near three o'clock : so that we were all taken ill that night, and strength was hardly left us to load the camels and arrange the baggage." The army of Sennacherib was perhaps destroyed by such a pestilential wind. It is often instantaneously fatal, and the word "angel" is expressly called in the original in Isaiah xxxviii. 7, a *blast*, or *wind*.—HARMER'S *Observations*, vol. i., pp. 162–165 ; BRUCE'S *Travels*.

"We remained encamped at Bushire," writes Morier, "until the 27th of March, during which time we experienced one of the discomforts of a tented life, in a gale of wind that blew from the southward and eastward, with such violence, that three of our largest tents were levelled with the ground. The wind brought with it such hot currents of air, that we thought it might be the precursor of the 'samoum ;' (simoom) but, upon inquiry, we found that the autumn was generally the season for that wind. The 'sam' wind commits great ravages in this district, and is hurtful to vegetation. It blows at night, from about midnight to sunrise, and comes in a hot blast, and is afterwards succeeded by a

cold one. About six years ago there was a 'sam' during the summer months, which so totally burnt up all the corn, then near its maturity, that no animal would eat a blade of it, or touch any of its grain. The image of corn blasted before it be grown up, used by the sacred historian, was most probably taken from a cause similar to what has just been stated, and the allusion is also perhaps to the pestilential wind, when the prophet says (in the same chapter) I will send a blast upon him. In the Psalms, we read of the wind that passeth over the grass, and it is gone."—*Second Journey through Persia*, pp. 42, 43.



While travelling in the desert of Nubia, "We were at once surprised and terrified by a sight, surely one of the most magnificent in the world.— In that vast desert

we saw a number of prodigious pillars of sand at different distances, at times moving with great celerity, at others stalking on with a majestic slowness ; at intervals we thought they were coming in a very few minutes to overwhelm us ; and small quantities of sand did actually, more than once, reach us. Again they would retreat so as to be almost out of sight, their tops reaching to the very clouds. There the tops often separated from the bodies ; and these, once disjoined, dispersed in the air, and did not appear more. Sometimes they were broken near the middle, as if struck with a large cannon shot. About noon they began to advance with considerable swiftness upon us, the wind being very strong at north. Eleven of them ranged alongside of us about the distance of three miles. The greatest diameter of the largest appeared to me, at that distance, as if it would measure ten feet. They retired from us with a wind at south-east, leaving an impression upon my mind to which I can give no name, though surely one ingredient in it was fear, with a considerable deal of wonder and astonishment. It was in vain to think of flying. The swiftest horse, or fastest sailing ship, could be of no use to carry us out of this danger, and the full persuasion of this riveted me as if to the spot where I stood, and let the camels gain on me so much in my state of lameness, that it was with some difficulty I could overtake them."

Next day "the same moving pillars of sand presented themselves, only they seemed to be more in number and less in size. They began immediately after sunrise, like a thick wood, and almost darkened the sun. His rays, shining through them for near an hour, gave them an appearance of pillars of fire. Our people now became desperate : the Greeks shrieked out, and said it was the day of judgment. I asked Idris if he had ever before seen such a sight ; he said he had often seen them as terrible, though never worse ; but what he feared most was that extreme redness in the air, which was a sure



presage of the coming of the simoom... At eleven o'clock, while we contemplated with pleasure the rugged top of Chiggre, to which we were fast approaching, and where we were to solace ourselves with plenty of good water, Idris called out with a loud voice 'Fall upon your faces, for here is the simoom!' I saw from the south-east a haze come, in colour like the purple part of the rainbow, but not so compressed or thick. It did not occupy twenty yards in breadth, and was about twelve feet high from the ground. It was a kind of blush upon the air

and it moved very rapidly, for I scarce could turn to fall upon the ground, with my head to the northward, when I felt the heat of its current upon my face. We all lay flat on the ground, as if dead, till Idris told us it was blown over. The purple haze was indeed passed, but the light air that still blew was of heat to threaten suffocation...It still continued to blow, so as to exhaust us entirely, though the blast was so weak as scarcely would have raised a leaf from the ground.”—BRUCE’S *Travels*.

ILLUSTRATION OF PSALM lxxxiii. 13.

“Whilst we were encamped at the village of Hassanabad,” writes Mr. Morier, “a violent wind arose from the eastward. It prevailed from the morning to about two o’clock P.M., when it changed about to the westward. At the time of the change, whirlwinds were to be seen in different parts of the plain, sweeping along the country in different directions, in a manner that was quite frightful to behold. They carried away in their vortex sands, branches, and the stubble of the fields, and really appeared to make a communication between the earth and the clouds. The correctness of the imagery used by the prophet Isaiah, xvii. 13, when he alludes to this phenomenon, is very striking to the Eastern traveller; and when we read in the Psalms, ‘Make them like a wheel, as the stubble before the wind :’ this also is happily illustrated by the rotatory action of the whirlwind, which frequently impels a bit of stubble over a waste, just like a wheel set into rapid motion.”—MORIER’S *Second Journey through Persia, &c.*, p. 202.

WATERSPOUTS.

The following is an account of the first water-spout seen by the Spaniards on the coast of America :—

“The sea ran in mountain-waves, covered with foam. For a day and a night the heavens glowed like a furnace, with incessant flashes of lightning ; while the loud claps

of thunder were often mistaken by the mariners for signal guns of distress from their foundering companions. During the whole time there was such a deluge of rain, that the seamen were almost *overwhelmed*. In the midst of this wild tumult of the elements, they beheld a new object of alarm. The ocean in one place became strangely agitated; the water was whirled up into a kind of pyramid, or cone, while a livid cloud, tapering to a point, bent down to meet it. Joining together, they formed a column, which rapidly approached the ships, spinning along the surface of the deep, and drawing up the waters with a rushing sound. The water-spout passed close by the ships without injuring them.”—*Life of Columbus*.

“On the afternoon of June 21, 1702, about two o’clock, at Hatfield, no wind stirring below, though it was somewhat great in the air, the clouds began to be much agitated and driven together; on which they became very black, and were very visibly hurried round, from whence there proceeded a most audible whirling noise, like that of a mill. After a while a long tube or spout came down from the centre of the congregated clouds, in which was a swift spiral motion like that of a screw, when it is in motion. It proceeded slowly from west to north-east, broke down a great oak-tree or two, frightened the weeders out of the field, and made others lie down flat, to avoid being whirled about and killed, as they saw several jackdaws had been, which were suddenly snatched up, carried out of sight, and then thrown a great way off among the corn. At length it passed over the town of Hatfield, to the great terror of the inhabitants, filling the whole air with the thatch it took off from some of the houses; then touching on a corner of the church, it tore up several sheets of lead, and rolled them together in a strange manner; soon after which, it dissolved and vanished, without doing any further mischief.”—CLARKE’S *Readings in Philosophy*.

ILLUSTRATION OF PSALM xxix. 9.*

A traveller passing by night through the valley of Mount Ephraim, remarks, "We were attended for above the space of an hour, with an *ignis fatuus* that displayed itself in a variety of extraordinary appearances. For it was sometimes globular, or else pointed like the flame of a candle; afterwards it would spread itself, and involve our whole company in its pale, inoffensive light; then at once contract, and suddenly disappear. But, in less than a minute, it would begin to exert itself, as at other times, running along from one place to another with great swiftness, like a train of gunpowder set on fire; or else it would spread and expand itself over more than two or three acres of the adjacent mountains, discovering every shrub and tree (the thick bushes, Psalm xxix. 9), that grew upon them. The atmosphere, from the beginning of the evening, had been remarkably thick and hazy, and the dew, as we felt it upon our bridles, was unusually clammy and unctuous. I have observed at sea, in the like disposition of weather, those luminous bodies that skip about the masts and yards of ships."

MOONLIGHT.

The burning heat of the sun in Eastern climates is well known; but the injurious effect of moonlight is not so generally thought of.

Moonlight in the East is peculiarly clear and lovely. A traveller in Egypt says, "It is delightful to rise by night and walk there in the brilliant moonlight, which has the appearance of a tranquil and beautiful day—you can see to read with perfect ease." Speaking of his voyage down the Nile, the same gentleman remarks, "Nothing could be more lovely than to glide along at

* Bishop Lowth thus renders this verse. "The voice of the Lord maketh the oaks to tremble, and maketh bare the forests."

night in the calm, cloudless moonlight—amidst such scenery it was difficult to close one's eyes in sleep." But delightful as it is, it is most prejudicial to those who venture to repose in the open air, without covering their faces. Thus the same traveller continues, "The effect of the moonlight on the eyes in this country is singularly injurious; the natives tell you, as I found they also afterwards did in Arabia, always to cover your eyes when you sleep in the open air. The moon here really strikes and affects the sight, more than the sun, when you sleep exposed to it; a fact of which I had a very unpleasant proof one night, and took care to guard against afterwards. Indeed, the sight of a person who should sleep with his face exposed at night, would soon be utterly impaired or destroyed."—CARNE'S *Eastern Letters*, pp. 77—83.

"The hot season in India lasts till the end of June. The sun is at this time very injurious, and the moon also. During the hot season, the people generally sleep out of doors. I have done the same; but always feared the effects of the moonbeams, and took as many precautions to exclude them from my bed as I did to protect myself from the snakes. The effects of the moon upon the human constitution are regarded as injurious by natives and Europeans; and I have frequently been reminded of the Lord's promise, when walking out late in the evening—'The sun shall not smite thee by day, nor the moon by night.'"—*Recollections of an Indian Missionary*, p. 7.

CHAPTER VI.

PRECIOUS STONES, ETC. MENTIONED IN SCRIPTURE.

ADAMANT.	EMERALD.
AGATE.	JACINTH.
ALABASTER.	JASPER.
AMBER.	LIGURE, <i>see</i> JACINTH.
AMETHYST.	ONYX.
BERYL.	PEARL.
CARBUNCLE.	RUBY.
CHALCEDONY.	SAPPHIRE.
CHRYSOLITE.	SARDINE.
CHRYSOPRASUS.	SARDIUS, <i>see</i> SARDINE.
CORAL.	SARDONYX, <i>see</i>
CRYSTAL.	ONYX.
DIAMOND.	TOPAZ.

EXODUS xxiv. 10.

“And they saw the God of Israel : and there was under his feet as it were a paved work of a sapphire stone, and as it were the body of heaven in his clearness.”

xxxix. 6—14.

“And they wrought onyx-stones inclosed in ouches of gold, graven, as signets are graven, with the names of the children of Israel...And he made the breast-plate... And they set in it four rows of stones : the first row was a sardius (or ruby), a topaz, and a carbuncle :...and the second row, an emerald, a sapphire, and a diamond. And the third row, a ligure, an agate, and an amethyst. And the fourth row, a beryl, an onyx, and a jasper... And the stones were according to the names of the children of Israel, twelve, according to their names, like the engravings of a signet, every one with his name, according to the twelve tribes.”

JOB xxviii. 16, 18, 19.

“It cannot be valued with the...precious onyx, or the sapphire. No mention shall be made of coral, or of pearls: for the price of wisdom is above rubies....The topaz of Ethiopia shall not equal it, neither shall it be valued with pure gold.”

ISAIAH liv. 11, 12.

“O thou afflicted, tossed with tempest, and not comforted, behold I will lay thy stones with fair colours, and lay thy foundations with sapphires; and I will make thy windows of agates, and thy gates of carbuncles, and all thy borders of pleasant stones.”

JEREMIAH xvii. 1.

“The sin of Judah is written with a pen of iron, and with the point of a diamond.”

LAMENTATIONS iv. 7.

“More ruddy...than rubies, their polishing was of sapphire.”

EZEKIEL i. 22, 26.

“And the likeness of the firmament...was as the colour of the terrible crystal...and above the firmament that was over their heads was the likeness of a throne, as the appearance of a sapphire-stone.”

iii. 9.

“As an adamant, harder than flint, have I made thy forehead.”

viii. 2.

“As the appearance of brightness, as the colour of amber.”

DANIEL x. 6.

“His body also was like the beryl.”

ZECHARIAH vii. 12.

“They made their hearts as an adamant-stone.”

MATTHEW xiii. 45, 46.

“The kingdom of heaven is like unto a merchant-man, seeking goodly pearls, who, when he had found one pearl of great price, went and sold all that he had, and bought it.” [JOB xxviii. 18 ; PROV. iii. 15,—viii. 11,—xx. 15,—xxxi. 10 ; LAM. iv. 7. In which passages our version translates *ruby*.]

xxvi. 7.

“There came unto him a woman having an alabaster box of very precious ointment, and poured it on his head, as he sat at meat.”

REVELATION iv. 3, 6.

“And He that sat was to look upon like a jasper and a sardine stone, and there was a rainbow round about the throne, in sight like unto an emerald....And before the throne there was a sea of glass like unto crystal.”

ix. 17.

“Breastplates of fire, and of jacinth, and of brimstone.”

xxi. 11, 18—21.

“Having the glory of God : and her light was like unto a stone most precious, even like a jasper-stone, clear as crystal....And the building of the wall of it was of jasper ; and the city was pure gold, like unto clear glass. And the foundations of the wall of the city were garnished with all manner of precious stones. The first foundation was jasper ; the second, sapphire ; the third, a chalcedony ; the fourth, an emerald ; the fifth, sardonyx ; the sixth, sardius ; the seventh, chrysolite ; the eighth, beryl ; the ninth, a topaz ; the tenth, a chrysoprasus ; the eleventh, a jacinth ; the twelfth, an amethyst. And the twelve gates were twelve pearls ; every several gate was of one pearl : and the street of the city was pure gold, as it were transparent glass.”

REVELATION xxii. 1.

“And he shewed me a pure river of water of life, clear as crystal, proceeding out of the throne of God and of the Lamb.”

[See also GEN. ii. 12 ; JOB xxviii. 6 ; CANT. v. 14 ; EZEK. xxvii. 16, xxviii. 13 ; 1 TIM. ii. 9 ; REV. xvii. 4, xviii. 12.]

In the description given us of the dress of the Jewish high-priest, we are told that his breast-plate was set with four rows of precious stones, on each of which was engraved the name of a tribe of Israel. An onyx-stone was placed on each shoulder, in each of which were engraved the names of six tribes. Thus the high-priest bore “their names before the Lord...for a memorial” continually. In this we are reminded of our great high-priest, the Lord Jesus Christ, who is our constant advocate in the court of heaven, “bearing the names of all his people, of all the *Israel of God*, upon his *shoulders*, that he may uphold them by his *power*,—and near his heart, that he may comfort them with his love.” (Exod. xxviii. 12, 30.) These precious stones were the *Urim and Thummim* by which the Lord in some visible, though to us, at this lapse of time, unknown manner, gave answer in cases solemnly referred to him for judgment.

The prophet Isaiah, when foretelling the future glory of Jerusalem, describes her foundations and walls as consisting of *precious stones*. These seem to be images or figures to express beauty, magnificence, purity, and strength, according to the ideas of the Eastern nations ; who, it is well known, are accustomed, in their conversation and writings, to express such characteristics by likening them to stones, flowers, &c. To an Oriental there is scarcely a precious gem or beautiful flower but at once reminds him of some unseen quality or property, of which he has been used to consider it the emblem.

Thus, the pearl is often made an emblem of purity; the diamond of durability; and the lovely blue sapphire of the pure heavens above. In the description of the heavenly Jerusalem, we read of the precious foundation-stones,—of the crystal river,—of the golden streets. These are among the loveliest and most valuable of God's works with which we are acquainted on earth, and they seem intended to typify to us the *spiritual* beauty, holiness, and glory of our eternal home.

When shall my eyes thy heaven-built walls
And pearly gates behold?
Thy bulwarks with salvation strong,
And streets of shining gold?

The following is a short description of such stones as are mentioned in the Bible; but, it must be remarked, that sometimes our translation does not appear to give the exact name of the stone intended in the original, and also, that as many stones have, in the course of time, lost their ancient names, and acquired other more modern ones, it is not always easy to identify the gems now known with those of the Bible.

ADAMANT.

The word signifies, *that which cannot be broken*. It is one of the names given to the diamond, and also to the hardest species of iron. It is translated *diamonds* in JER. xvii. 1. The Hebrew means a very hard kind of stone, such as was used to cut, engrave, and polish other stones.

Adamantine Spar, or Corundum, is a stone, which is found either as a regular crystal, with little lustre, or in mass. Those which are procured from India are usually deemed the purest. Both there and in China, being extremely hard, it is used to polish steel and gems. In the vicinity of the Carenal, in the Mysore, a vein of

adamantine spar is found, which is cut out in considerable masses, and transported, on horses and bullocks, into different parts of India. It was first brought into Europe at the commencement of the eighteenth century.

Corundum is only the sapphire and ruby in a less pure state. It varies in tint, from being sometimes nearly colourless and semi-transparent, to green, brown, red, &c., and occasionally to black and opaque. It is employed to cut and polish gems in the East, and occasionally also in Europe; but diamond-powder, though it is far more expensive, is preferred here, from its more rapid action. (Emery is a variety of Corundum.)

AGATE.

Agate, a variety of Chalcedony, having bands of various colours curving round a centre, upon a semi-transparent ground. It is sometimes called Achates, as is supposed, from it having been first found in the river Achates in Sicily. Small agates are frequently found in common gravel. There are many beautiful varieties of agate, some of which resemble a painted landscape, having figures like trees, clouds, &c. There is a variety called *mocha-stone*, which resembles mosses, ferns, &c., which is considered to be owing to those vegetables being really enclosed in the stone.

ALABASTER.

Alabaster closely resembles marble. It is a species of onyx, and is sometimes called onychites. It is a bright, elegant stone, often white as snow. This was the stone prepared by David for the temple (1 CHRON. xxix. 2). It is easy to cut and polish, and, from its softness, can

be wrought into any form desired. Vases were often made of it, to hold sweet ointments and perfumes ; and the Egyptian druggists still keep their medicines, &c., in alabaster vessels. By *breaking* the box (MARK xiv. 3,) is meant, opening the seal upon it.

Drinking-cups, legs of tables and couches, pavements, and columns, were made by the Romans of this stone, which is sometimes called *onyx* ; but which must not be confounded with the *gem* of that name. Both this and the gem onyx, were so called from their resemblance to the nail of the finger.

AMBER.

Amber is a resinous, hard, inflammable substance, of which there are two kinds—the white and the yellow. The latter is that intended by the prophet ; but, as it soon becomes dim when it feels the fire, and is speedily consumed, it is probable that not amber *itself*, but perhaps a mixed metal, which was in use among the ancients, and which shone with a lustre *like* amber, was the article alluded to. Amber takes a most beautiful polish. It is found on the coasts of the Baltic, and in beds of wood-coal in several places in Europe and other countries. It appears to be sometimes used as money, for a traveller (I think in Africa) writes, “ We paid for what we wanted in little coarse bits of amber.”

AMETHYST.

A transparent gem, which seems to be composed of a strong blue and deep red, so that it affords different tinges of purple, from rose-colour to violet. The Eastern amethyst is the most rare, hard, and precious. It is found in India, Siberia, and Spain ; and inferior stones are abundant in most countries.

BERYL.

The beryl is of a sea, or bluish-green colour. From this it appears to have derived its Hebrew name, for the word is applied to the *sea* in two passages of Scripture, *viz.*, PSALM xlvi. 7, and ISAIAH ii. 16, where our translation reads Tarshish. This precious gem is distinguishable from the emerald principally by its colour. The colours of the beryl are pale grayish-green, and blue, and yellow, of various shades ; it has also been found rose-red, and sometimes colourless. The finest beryls come from Siberia, and from Dauria, on the Chinese frontier.

A variety of this stone is called aqua-marine (sea-water), from its colour so nearly resembling that of the sea. Large and fine specimens of this stone are brought from Brazil.

CARBUNCLE.

A very rare gem, which, when held up before the sun, appears like a piece of burning charcoal. Hence it was known to the ancients by the name of anthrax or *coal*. It is thought that the *precious garnet* is the same with the carbuncle of the ancients. It is of a beautiful red colour, sometimes with shades of yellow or blue. Those from Peru are most valued. Common garnets are duller and more opaque.

CHALCEDONY.

This is the name of a mineral, of which various precious stones are composed, as onyx and sardonyx, carnelion, agate, jasper, &c. The name in Scripture appears to be applied to some particular stone, probably to

one of the kinds formed out of chalcedony. It may have been carnelion ; when first found, these stones are of a dark-olive colour, and obtain the light red or white hue they are usually seen with by exposure to the air, and by being baked, it is said, in ovens. The best carnelion comes from the West Indies ; but it is also found in Siberia, Europe, and America. Or it may be the *blood-stone* which is alluded to,* and which is so called from its being speckled with red spots. This is a favourite stone to cut into seals, &c.

CHRYSOLEITE (GOLDEN-STONE).

A precious stone of a golden colour ; perhaps the same with that now called Indian topaz, which is a beautiful gem, of a yellowish-green colour.

CHRYSOPRASUS.

A stone of an apple-green colour ; but it loses the delicacy of its original hue if much handled or worn as an ornament.

CORAL.

Coral is a hard marine production, resembling in figure the stem of a plant divided into branches. It lifts itself to some height above the water, and might very properly be called the branching-stone, its appearance being so frequently that of a branching shrub. It is of different colours, white, black and red. Immense

* This stone is also called " Heliotrope " and " Oriental Jasper."

reefs, or rocks, are formed of coral, and are highly dangerous to ships. There are also coral *islands*, which in process of time have become inhabited.

The "Encyclopædia Metropolitana" will furnish us with some interesting accounts of this wonderful production.

The red coral was well known to the ancients. It was, however, only in later ages that its true nature was understood. Theophrastus mentions it as a precious stone. Pliny says that the Indians have the same value for the little grains of coral that are often found thrown upon the shore as the Europeans have for pearls. They are considered by the diviners and jugglers as amulets of power, and are worn by them as ornaments pleasing to their gods. The Gauls ornamented their armour and dresses of ceremony with coral; and the Romans hung it about their children, as a charm to ward off the diseases of infancy.

At length it was discovered that coral is no other than a habitation for minute animals, *made by the animals themselves*.

"The examination of a coral-reef (or rock) during the different stages of one tide is particularly interesting; when the tide has left it for some time it becomes dry, and appears to be a compact rock, exceedingly hard and rugged; but, as the tide rises, and the waves begin to wash over it, the coral-worms protrude themselves from holes that were before invisible. These animals are of a great variety of shapes and sizes, and in such prodigious numbers, that in a short time the whole surface of the rock appears to be alive, and in motion. The most common worm is in the form of a star, with arms from four to six inches long, which are moved about with a rapid motion, in all directions, probably to catch food. Others are so sluggish, that they may be mistaken for pieces of rock, and are generally of a dark colour, and from four to five inches long and two or three round. When the coral is broken about high-

water mark, it is a solid hard stone ; but if any part of it be detached at a spot where the tide reaches every day, it is found to be full of worms of different lengths and colours, some being as fine as a thread, and several feet long, of a bright yellow, and sometimes of a blue colour ; others resemble snails, and some are not unlike lobsters in shape, but soft, and not above two inches long."...CAPTAIN B. HALL, *Voyage to Loo-Choo*.

Some of the animals thus described were doubtless intruders that had sought shelter or food in the interstices of the coral : the true architects of these wonderful structures are polypes of minute size....They consist of a little oblong bag of jelly, closed at one end, but having the other extremity open, and surrounded by tentacles (or arms), usually six or eight in number, set like the rays of a star. Multitudes of these tiny creatures are associated in the secretion of a common stony skeleton—the coral, in the minute orifices of which they reside, protruding their mouths and tentacles when under water, but withdrawing themselves by sudden contraction into their holes the moment they are molested.

But how do these tiny creatures rear their vast and beautiful habitations ? It is difficult to make the answer simple enough to be readily understood by one whose knowledge both of chemistry and natural history is limited. In a general way, however, it may be said, that the water of the sea contains, suspended in it, a certain quantity of calcareous, that is, stony matter. Of this the polypes possess themselves, absorbing it into their bodies. This stony matter is again given forth or secreted, and forms around them a *stony crust*, as we may call it, which is continually growing around them so long as the animals themselves live and multiply ; and which forms the dwelling-places of its little builders, myriads of whom will be found inhabiting the holes of even one small piece of coral.

"The growth of the coral appears to cease when the worm is no longer exposed to the washing of the sea.

Thus, a reef rises in the form of a cauliflower, till its top has gained the level of the highest tides, above which the worm has no power to advance, and the reef, of course, no longer extends itself upwards; the other parts in succession reach the surface, and then stop; forming in time a level field, with steep sides all around. The reef, however, continually increases, and being prevented from going higher, extends itself laterally* in all directions. But this growth being as rapid at the upper edge as it is lower down, the steepness of the face of the reef is still preserved. These are the circumstances which render coral reefs so dangerous in navigation; for, in the first place, they are seldom seen above the water, and in the next, their sides are so steep, that a ship's bows may strike against the rock before any change of soundings has given warning of the danger."

The red coral is found in various parts of the Mediterranean and Red Seas. It grows on rocks, and on any solid submarine body; and it is necessary to the well-being of the little animals which produce and inhabit it, that it should remain fixed to its place. On being broken from its foundation, it soon loses the soft substance with which the stony stem is enveloped, and the animals are consequently destroyed. It requires eight or ten years to arrive at its greatest size, and it becomes afterwards pierced in all directions by different marine animals which perforate rocks, shells, and every other stony substance upon which they fix. The depth at which this beautiful production is obtained varies very considerably; but it seems necessary to its perfection that the rays of the sun should readily penetrate to the place of its habitation; it is found, therefore, not only that the finest coral is to be obtained in situations to which the rays of the sun have the most ready access, but that it there comes to perfection also in a much shorter period. The consequence of this variation of colour and size is, that there are several varieties of red coral dis-

* By the side, sideways.

tinguished in merchandize, which differ in value according to the depth and brilliancy of the colour.

Mr. Dalrymple remarks, "I have seen coral banks in all their stages, some in deep water, others in rocks appearing above the surface; some just formed into islands, without the least appearance of vegetation, others with a few weeds on the higher parts; and, lastly, such as are covered with timber, with a fathomless sea at a pistol-shot distance." Captain Hinders paid much attention to the barrier of reefs which runs along the whole eastern coast of New Holland, and on one of which he was shipwrecked. In one place, he says, "We had wheat-sheafs, mushrooms, stags'-horns, cabbage-leaves, and a variety of other forms growing under water, in the varied tints of every shade, between green, purple, brown, and white. It seems to me that when the little animals which form the coral cease to live, their structures adhere to each other, by virtue either of the glutinous remains within, or of some property of the salt-water, and the interstices being gradually filled up with sand, and broken pieces of coral washed by the sea, which also adhere, a mass of rock is at length formed. Future races of these animals erect their habitations on the rising bank, and die in their turn, to increase, but principally to elevate, this monument of their wonderful labours."

With respect to the islands formed principally of coral, it has been observed that, "As soon as the coral has reached such a height that it remains almost dry at low water at the time of ebb, the corals leave off building higher; sea-shells, fragments of coral, &c., &c., are united by the burning sun, through the medium of the cementing sand, into one whole or solid stone, which, strengthened by the continual throwing up of new materials, gradually increases in thickness, till it at last becomes so high that it is covered only during some seasons of the year by the spring-tides. The heat of the sun so penetrates the mass of stone when it is dry, that it splits in many places, and breaks off in flakes. These

flakes, so separated, are raised one upon another by the waves at the time of high-water. The always active surf throws blocks of coral and shells of marine animals between and upon the foundation stones. After this, the (sandy surface) lies undisturbed, and offers to the seeds of trees and plants, cast upon it by the waves, a soil upon which they rapidly grow, to overshadow its dazzling white surface. Entire trunks of trees, which are carried by the rivers from other countries and islands, find here, at length, a resting-place after their long wanderings ; with these come some small animals, as lizards and insects, as the first inhabitants. Even before the trees form a wood the real sea-birds nestle there ; strayed land-birds take refuge in the bushes ; and at a much later period, when the work has long since been completed, man also appears, builds his hut on the fruitful soil formed by the corruption of the leaves of the trees, and calls himself lord of this new creation."

Another writer observes to the same purpose, "The action of the sun and air soon converts the surface into a species of mould, the birds or the waves convey to it seeds from other lands, and the whole becomes clothed with vegetation. The islands of coral which are thus produced harden by time till they become one solid mass."

The following description of a coral island is abridged from an interesting work called "The Ocean."

"Imagine a belt of land in the wide ocean, not more than half a mile in breadth, but extending, in an irregular curve, to the length of ten or twenty miles or more : the height above the water not more than a yard, or two at most, but clothed with a mass of the richest and most verdant vegetation. Here and there, above the general bed of luxuriant foliage, rises a grove of cocoa-nut trees, waving their feathery plumes high in the air, and gracefully bending their tall and slender stems to the breathing of the pleasant trade-wind. The grove is bordered by a narrow beach on each side, of the most glittering whiteness, contrasting with the beautiful azure waters by

which it is environed. From end to end of the curved isle stretches, in a straight line, forming, as it were, the cord of the bow, a narrow beach of the same snowy whiteness, almost level with the sea at the lowest tide, enclosing a semicircular space of water between it and the island, called the lagoon. Over this line of beach, which occupies the leeward side, the curve being to



CORAL ISLAND.

windward, the sea is breaking with sublime majesty; the long unbroken swell of the ocean, hitherto unbridled through a course of thousands of miles, is met by this rampart, when the huge billows rear themselves upwards many yards above its level,...and then fall with loud and hollow roar. Contrasting strongly with the tumult and confusion of the hoary billows without, the water

within the lagoon exhibits the serene placidity of a mill-pond, and the surface, unruffled by a wave, reflects the mast of the canoe that sleeps upon its bosom, and the tufts of the cocoa-nut plumes that rise from the beach above it. Such is a coral island; and, if its appearance is one of singular loveliness, its structure is no less interesting and wonderful. The beach of white sand, which opposes the whole force of the ocean, is found to be the summit of a rock which rises abruptly from an unknown depth, like a perpendicular wall. The whole of this rampart, as far as we can see, appears composed of living coral....In these regions may be seen islands in every stage of their formation,—some spreading like gardens and shrubberies under the sea.”

The following is an account of the way of obtaining coral :—“The divers in Provence have two different implements which they employ for the purpose of obtaining coral. The first is used to tear it from the rocks; it consists of a large wooden cross, to the centre of which is attached a heavy weight of lead, which sinks it readily, and it is held by a long thick cord. To each extremity of the cross is fixed a round network, or parcel of loose cords. When they have thrown this instrument into the sea, in places wherein the divers have previously ascertained that there are a number of cavities in the rock well filled with coral, the one who has the management of the machine pushes some of the network into these interstices, and in this way the coral becomes entangled, and the persons in the boat then break it off, and draw it out of the water.

“The other instrument is employed in obtaining the coral from deep caverns, and consists of a very long beam of wood, to the extremity of which is attached a circle of iron of a foot and a half in diameter, with a large reticular sack, with two round nets placed on each side. This beam is fixed by two long cords to the stem and stern of the boat; it is sunk by means of a large plummet of lead, and is drawn about the bottom of the

sea in different directions by the movements of the boat. The iron ring breaks off the small branches of coral which are attached to the sides of the caverns, and the other parts are entangled in the nets. Sometimes, though rarely, they obtain in this way branches weighing three or four pounds : and this would more frequently be the case, were it not that the people who fish for coral are permitted to repeat their operations too often."

CRYSTAL.

The original Hebrew word is sometimes translated crystal, and sometimes *frost*, and *ice*.

The beautiful class of stones called *crystals* probably have that name from their resemblance to ice. Crystal is perfectly transparent, bright, and sparkling, and assumes very beautiful and regular forms. Immense caverns have been found, entirely covered within with crystals. One was discovered in 1823, having a *roof* of crystal fifteen feet in thickness. *Terrible* crystal seems to denote that of extraordinary brightness and transparency.

DIAMOND.

The diamond is the most precious of all stones. It is of a white colour, and beautifully transparent. It is found in the East Indies and in Brazil. The common mode of obtaining diamonds is to turn the course of the stream, and to wash, sift, and pick the sand, to separate the precious stones. When a large diamond is found, of a perfect *water*, as it is called, free from flaws, and admitting of being well cut, its value, from its rarity, is enormous. The largest diamond known belonged to the

late Emperor of Brazil, and, according to the usual calculations, would be worth 5,645,000*l*. But it is for the purpose of grinding and cutting other hard substances that the greatest demand for diamonds exist ; all those of a bad colour or form are reduced to powder, by the help of which all precious stones are cut and polished, as well as crests and cyphers for seals, &c. Glass is cut by a diamond having its natural edge perfect ; for all broken or artificially formed edges will only scratch and tear that substance.

Diamonds themselves are cut and polished by being rubbed against a flat steel wheel, made to revolve rapidly ; diamond-powder—that is, diamonds pounded fine,—mixed up with some oil, being spread on the surface.

There are diamond mines in the mountains of Panná (in the East Indies) for a distance of about twenty miles, beyond which no diamonds are found. The diamonds are intermixed with pebbles, but never united to them, and vary from the size of a pea to that of a filbert ; but the latter are very rare. The workmen receive as a recompense three-fourths of the value of the smallest. Such was the case in 1814 ; but the mines are now nearly exhausted.

It was only about the beginning of the last century that diamonds made a part of the exports from Brazil to Europe. These valuable stones are, like the gold, frequently found in the beds of rivers and torrents. Before they were supposed to be of any value, they were often perceived in washing away the gold, and were consequently thrown away with the sand and gravel. The diamonds sent from the New to the Old World were enclosed in a casket with three locks, the keys of which were separately put into the hands of the chief members of administration ; and those keys were deposited in another casket, to which was affixed the viceroy's seal.

EMERALD.

The emerald is one of the most beautiful of all the gems. It is of a bright-green colour, without the admixture of any other. The true eastern Emerald is very scarce, and is only found at present in the kingdom of Cambay.

JACINTH, OR HYACINTH.

This is by some considered as the *ligure* of Scripture. It is described as of deep-red colour, with a considerable tinge of yellow. It is found in beds and streams of rivers in the East, along with rubies, sapphires, &c.

JASPER.

The jasper is a hard stone, of a bright, beautiful green ; sometimes clouded with white, and spotted with red or yellow. There are also red, yellow, and brown varieties. It is a kind of chalcedony.

ONYX. SARDONYX.

The onyx is a variety of chalcedony, and derives its name from the Greek word for nail, or hoof, the white and darkish horny colour of which it in some parts resembles. It has flat layers or bands of chalcedony of different colours. The sardonyx is another variety, marked with reddish bands or circles, so distinct that they appear to be the effect of art.

PEARL.

Pearls, whose exquisite beauty have made them celebrated from the earliest ages, are well known to be marine productions ; and the shores of the Indian Ocean yield the finest specimens. Many bivalve shells produce pearls of greater or less perfection ; but it is the pearl oyster which I shall here mention. The interior surface of the shell is covered with very thin pearly plates. In some diseased states of the animal, or when the shell has received a trifling injury, or some foreign body—a grain of sand, for example—has found its way within, the pearly secretion is poured out in great abundance around the part, and, layer being imposed upon layer, produces a pearl, either attached to the inner surface of the shell, or loose.

The shell which contains the pearls differs considerably, as is well known, from the oysters properly so called. The flesh of this shell-fish, though unpalatable, is eaten by the Hindús of the lower classes. The pearls are formed only in the softer part of the animal, from the extravasation of glutinous matter either within its body or on its surface ; exuded probably for the purpose of sheathing some rough and foreign substance, such as sand drawn into the shell with the food. The continual addition of fresh coats, one over the other, at length completes the pearl, which, when cut in half, appears to have the same structure as an onion, or any other bulb. These different coats often vary in colour, and a grey covering sometimes conceals a pearl of fine lustre, while at others a brilliant outside case contains a worthless, impure pearl. Those which have a golden hue are most esteemed by the natives ; some have a bright, red lustre ; others are grey or blackish, without brilliance, and of no value. Spotted and irregular pearls are sold cheap.

Mannar is the name of a small island close to the western shore of Ceylon. Along the south of this island

lie the banks where the pearl oysters are found. From the middle of February to the 15th of April, about which time the south-east monsoon sets in, is the season for fishing, the sea being then generally calm enough for the boats to reach the banks, and the divers to go down in search of shells ; but stormy weather, Pagan, Moham-medan, and Christian holidays, and reports of sharks, often interrupt the labours of the fishermen, so that they seldom work for more than thirty days during the season. One or two banks only are cleared in each year ; and persons are deputed annually to examine the banks in order to ascertain before the fishery commences where it can be carried on successfully. But no precautions are taken, unless some regulations to that effect have been lately established, to prevent the destruction of immature shells, and thus the beds are exhausted, so that, in order to replenish them, fourteen or more years, instead of seven, the natural period, are now requisite.

Kondáche, a village consisting of a few huts on a semicircular bay, in a waste, sandy district, is the usual place of rendezvous. It is a wretched spot, where even water is very expensive, there being none that is drinkable nearer than Aripò, four miles to the north : but during the fishing-season this dreary waste presents a most novel and amusing scene. Thousands of people, of almost every colour, caste, and occupation, are seen crowded together ; the shore is covered with tents, huts, shops, and bazárs, and fleets of boats return in the evening, laden with their motley crews and cargoes ; while the speculators in their produce, full of eagerness and impatience, are hurrying to ascertain whether their “cunning men” have read the stars aright, and fixed upon the happy moment for the commencement of their labours. Brokers, jewellers, merchants, pastrycooks, and piemen ; Hindú devotees and beggars, pearl-sorters and borers, weighers and retailers, complete the throng ; and as riot and disorder would, but for timely interference,

soon prevail amidst such a multitude, a party of soldiers, under the command of an officer, is prudently stationed there. But some drawbacks diminish the comforts of the visitors; the price of every kind of provisions is enormous; the water of the place is brackish, and makes those who drink it ill; and daily accumulating heaps of putrefying oysters fill the air with a cadaverous stench, and generate swarms of insects, in number sufficient to annoy even a well-seasoned East Indian. Many of the strangers, therefore, die; and fever, fluxes, and other pestilential diseases are often carried back by the rest to their native country. At ten o'clock P.M. a gun is fired as a signal, and the boats set sail from Kondáche with the land-breeze, which carries them to the bank before daylight. At sunrise they begin to dive, and continue to do so till the sea-breeze, which brings them back, sets in. In the course of the afternoon they come to an anchor, and their cargoes, sometimes amounting to 30,000 oysters, are discharged before night. Each boat carries a captain, ten rowers, and ten divers, with pyramidal diving-stones of granite, each a foot long, and six inches thick, and weighing about thirty pounds. The divers go down five at a time; place the air-rope, to which the diving-stone is fastened, between two toes of one foot, and that attached to the net between those of the other, then seizing the two cords still fastened to the boat with one hand, and stopping their nostrils with the other, plunge into the water. When at the bottom they hang the net round their necks, and fill it with shells as fast as possible, pulling one of the cords so soon as they find themselves exhausted, which is usually in two minutes. They are immediately hauled up, discharge water, and sometimes blood, from their mouths and noses, are succeeded by the other party of five, and are ready to dive again themselves when their comrades have come up. Fifty such descents are often made before noon, and 25,000 shells brought up, one-fourth of which is allowed as wages to

the boat's crew. Some of these divers have acquired, by long practice, a power of remaining under water so long as seven minutes.

The myæ, another shell containing pearls, are to be found both in the sea and in rivers. The marine kinds generally live under sand or sludge. And the place where they lie is betrayed by a small hole, out of which they occasionally protrude their proboscis. Those which inhabit rivers are generally found in the mud at its bottom. In some places the animals are used for food; but what makes them of considerable importance is, the quantity of pearls which they sometimes produce. This shell is well known in Britian by the name of the pearl muscle. We are informed in the *Philosophical Transactions*, that several pearls of great size have been procured from the rivers in the counties of Tyrone and Donegal, in Ireland. There was also a great fishery for pearls in the river Tay, which extended from Perth to Loch Tay; and it is said that the pearls sent from thence, from the year 1761 to 1764, were worth 10,000*l*. It is not uncommon in the present day to find pearls in those shells which bring from 1*l*. to 2*l*. It is said that those in the Scottish crown, which forms part of the regalia now exhibited in the castle of Edinburgh, are the produce of the river Tay.

The small island of Cabagua, in the Caribbean Sea, was noted for a pearl-fishery. It was first discovered by Columbus. At that time the coast from Paria to Cape de la Vela was called the Coast of Pearls; the first Spaniards who landed on its shores finding the natives everywhere decorated with these valuable jewels. Until the year 1530 the fishery averaged yearly 173,000*l*. But this profitable branch of commerce diminished rapidly afterwards, and was entirely at an end before 1683. It is conjectured that this decay arose from the destruction of the pearl-fish, as well as from the arts of cutting and setting diamonds having become common in the sixteenth century.

RUBY.

It is thought that the word rendered *sardius* in some passages of Scripture should be translated *ruby*, which is a beautiful gem, of a red colour, mixed with purple. The ruby, from its splendid colour, ranks in value and estimation next to the diamond. When the specimen is fine, and free from flaws, a ruby of large size will fetch from 10,000*l.* to 15,000*l.*

SAPPHIRE.

The sapphire is extremely beautiful and valuable. Its proper colour is pure blue. In the choicest specimens it is of the deepest azure ; and in others varies into paleness, in shades of all degrees between that and a pure crystal brightness, without the least tinge of colour, but with a lustre much superior to the crystal. The Oriental sapphire is the most beautiful and valuable. It is transparent, of a fine sky colour, sometimes variegated with veins of a white sparry substance, and distinct separate spots of a gold colour. Whence it is that the prophet describes the throne of God as *like unto sapphires*.

The sapphire is, next to the diamond, the hardest substance in nature. The finest sapphires come from Pegu, Ceylon, &c. They are found in the sands and beds of rivers.

SARDINE, SARDIUS.

The sardine is the same with the *sardius* ; the best of which were found at Sardis. It is a stone of a blood-red colour.

TOPAZ.

“This stone varies more than most gems, both in size, form, and colour: the Brazilian species is often as transparent as a piece of clear ice when the surface is melting, and resembles that substance in its limpid appearance; in other countries it is green, blue, yellow, or pink, of various shades. The Scotch pebble, called from the place where it is found, Cairn-gorum, is a topaz.”

TURQUOISE.

In travelling towards Sinai, Laborde mentions, that his attendant searched among the ruins of some tombs at a place called Sarbout El Cadem, for turquoise stones, which are found there in great abundance, being brought to the surface by the rains. “He gave me five of these stones, which were of considerable size, parting with them without the slightest reluctance. The Arabs of the present day attach no value to the turquoise, though in former ages it was much sought after in the East, the most extraordinary medicinal qualities having been ascribed to it. A person spending a few days on this mountain, where he will be exposed to no danger, and which is not more than six days’ journey from Cairo, might make a large collection of turquoises, which, though not to be ranked among the best of precious stones, nevertheless possess a certain value.”—LABORDE, pp. 91, 92.

The turquoise is not mentioned by that name in our translation of the Scriptures; but it is very probable that it formed one of the Blue Stones intended in the original, though it cannot now be identified. It is opaque, of a bright greenish blue colour, and is found

in roundish masses, from the size of a pea to that of an egg ; the best specimens come from Persia. The effect of diamonds and pearls is much enhanced by their being set with the turquoise, on account of the contrast of colour.

There is one beautiful passage in the word of God, which occurs in the Book of Malachi, (iii. 16, 17,) and may also be called the closing promise of the Old Testament. With it we will conclude this account of precious stones.

“ THEN THEY THAT FEARED THE LORD SPAKE OFTEN ONE TO ANOTHER ; AND THE LORD HEARKENED AND HEARD IT, AND A BOOK OF REMEMBRANCE WAS WRITTEN BEFORE HIM FOR THEM THAT FEARED THE LORD, AND THAT THOUGHT UPON HIS NAME . . . AND THEY SHALL BE MINE, SAITH THE LORD OF HOSTS, IN THAT DAY WHEN I MAKE UP

“ *My Jewels.* ”

SCRIPTURE NATURAL HISTORY.

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APPENDIX TO THE SECOND EDITION.  
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PART I.

ANTS—ANT-EATER.

ASS.

ASS, WILD.

BEEES.

BULL.

CAMEL.

CHAMELEON.

EAGLE.

FLIES.

GIRAFFE.

HORSE.

HUNTING.

LION.

PIGEON-VILLAGES.

PITS.

PURPLE SHELL-FISH.

SERPENT.

SPIDER.

UNICORN (RHINOCEROS, BUF-
FALO, ORYX).

ZIC-ZAC.

ANTS. ANT-EATER.

ON his excursion to Solomon's Pools, Mr. Woodcock remarks: "I was much struck by the immense number of ants in this neighbourhood, their long columns carrying food to their nests, crossing the pathway at every step."—*Scripture Lands*.

"Malta.—G. brought home with him to-day a very pretty little bird, called the *Queen*, or *Ant-eater*, the latter referring to its singular manner of obtaining its livelihood. It lays itself down on the ground in the neighbourhood of its prey, and remains quite motionless, feigning death, but at the same time hanging its long tongue out. The ants, attracted by a glutinous moisture peculiar to it, are soon brought around; and when there are a sufficient number collected, the bird suddenly draws in its tongue and swallows the repast."—*Journey across the Desert*.

ASS.

"I never saw anything so richly caparisoned as the donkeys in Egypt: they look very far from the despised animals they are in Europe. There was one standing in the square opposite our windows this morning, that had a saddle and saddle-cloth of crimson velvet, ornamented with gold or yellow-lace, embroidery, and tassels, and its other trappings were of corresponding richness."—*Journey across the Desert*.

"The Cairo donkey deserves a place in zoology to itself, for it is different from any other of its species. It is distinguished less for its size than for its docility and strength. The weight they will carry, and the pace they go, are extraordinary; they walk, trot, and canter, as regularly as a horse. The saddles they carry are very large, and stuffed quite soft, the pommel rising high in front. They are generally of a very gay colour,

and furnished with bridles covered with red carpet, and a pair of fantastic iron stirrups. There is always a donkey-boy for each, who drives his customers forward like a bale of goods.”—MRS. GRIFFITH.

WILD ASS.

“I rode through the desert to Tel Afer. . . . As evening approached, we saw congregated near a small stream, what appeared to be a large company of dismounted Arabs, their horses standing by them. As we were already near them, and could not have escaped the watchful eye of the Bedouin, we prepared for an encounter. . . . We approached cautiously, and were surprised to see that the horses still remained without their riders : we drew still nearer, when they all galloped off towards the desert. They were wild asses. We attempted to follow them. After running a little distance they stopped to gaze at us, and I got sufficiently near to see them well ; but as soon as they found that we were in pursuit they hastened their speed, and were soon lost in the distance. In fleetness they equal the gazelle, and to match them is a feat which only one or two of the most celebrated mares have been known to accomplish. The Arabs sometimes catch the foals during the spring, and bring them up with milk in their tents. I endeavoured in vain to obtain a pair. They are of a light fawn colour, almost pink. The Arabs still eat their flesh.”—LAYARD’S *Nineveh*.

BEES.

ILLUSTRATION OF PSALM cxviii. 12.

“Our tents were pitched under the shade of some pine-trees, and near a cistern which still contained a

little water. The situation was very beautiful, but made less agreeable than it might have been by an accident. Our little flock of sheep and goats were resting after their march, under a spreading tree, when a monkey, who had come down to steal the shepherd's breakfast, and was driven back by him, in his hurried flight among the branches stumbled on a bees' nest, which hung suspended in the air, and not only got himself well stung, but brought out the whole swarm in fury against the poor, unoffending animals beneath. Most of them were severely stung, and bleated pitifully; but it was curious to observe the different conduct between the sheep and the goats. The former crowded all together, burying their noses in the sand, but with no apparent notion of flight or resistance; the latter ran off as fast as they could for shelter among our tents, pressing in for security as so many dogs would have done. They brought, however, such a swarm of their pursuers adhering to their coats and following them close, that their coming was very little to be desired, and we were forced to refuse them the hospitality which they would otherwise have received. Indeed, as it was, my tent was filled for a short time with bees, and several of the people were stung."—BISHOP HEBER's *Journal*.

Not very long ago an account appeared in our own public journals, of a furious attack made by several hives of bees upon a fine team of horses, whom they entirely covered, filling even the nostrils of the poor animals, who fell victims to their vengeance, which had been excited by their being disturbed, I think, in the pulling down of an old wall. The man who accompanied the team, with difficulty saved himself by plunging into a pond of water.—*Compiler*.

Bees were so troublesome in some districts of Crete, that, according to Pliny, the inhabitants were actually compelled to forsake their homes. Ælian reports, that some places in Scythia were formerly inaccessible on account of the numerous swarms of bees with which

they were infested. Mr. Park relates, that some of his associates imprudently attempted to rob a numerous hive which they found in their way. The little creatures rushed out to defend their property, and attacked them so furiously, that the whole company, men, horses, and asses, began to scamper off in all directions. The horses were never recovered, and a number of asses died from the effects of the stings next day.

WILD BULL.

DEUTERONOMY xiv. 5.

“The wild ox” . . .

ISAIAH li. 20.

“As a wild bull in a net.”

“The wild bull, from its frequent representation in the bas-reliefs, appears to have been considered scarcely less formidable and noble game than the lion. The king is frequently seen contending with it, and warriors pursue it both on horseback and on foot. . . . The bull of the bas-reliefs of Nimroud is evidently a wild animal which inhabited Mesopotamia or Assyria. . . . It is distinguished from the domestic ox by a number of small marks covering the body, and probably intended to denote long and shaggy hair. . . . As mention is also made in the Bible of the wild ox, it is probable that at some ancient period this animal was an inhabitant of Assyria, or of the adjacent countries, although it has long since become extinct. . . . As it is only seen in the oldest monuments of Nimroud, . . . it is possible that when the country became more thickly peopled in the latter period of the Assyrian empire, the wild ox disappeared.”—LAYARD'S *Nineveh*.

CAMEL.

“It is most true that God is gracious to all, and supplies the wants of all. These people of the desert would inevitably perish if not for the provision made for them in the camel. This creature carries them through the desert, feeds on the thistles found in the wildest places, travels a week without water, and supplies them with milk to drink, and hair for their clothing.”—*Voice from Lebanon*, p. 163.

“That camels formed a principal part of the flocks of the people anciently inhabiting Assyria and Chaldea, we have ample proof in the Bible. . . . They were used as beasts of burden (Gen. xxxi. 34 ; 1 Sam. xxx. 17), also to this day, by couriers and for posts (Esther viii. 10, 14). This fleet dromedary was not a distinct animal, but probably a camel specially trained. I have travelled on those used in the Arabian desert, and their speed and powers of endurance are both equally surprising. Herodotus mentions that the camels used by a certain tribe of Indians were as swift as horses.

“The two-humped camel is a native of Bactria, or of the great Steppes inhabited by the Tatar tribes. It is unknown to the Arabs, and is rarely seen to the west of Persia.”—LAYARD’S *Nineveh*.

CHAMELEON.

“We caught a chameleon, six inches long. It was deep green, with dark spots ; but the colour became of a lighter hue, and turned brown when the animal was placed upon a stone. This chameleon was brought safely home, together with a pheasant from the vale of Sharon. Nearly everything else, including some singular blue pigeons from the Dead Sea, perished.”—LYNCH’S *Expedition*.

EAGLE.

DEUTERONOMY xxxii. 11.

“As an eagle stirreth up her nest, fluttereth over her young, spreadeth abroad her wings, taketh them, beareth them on her wings.”

The eyrie known by the name of the Eagle's Cliff, in Ireland, “has been deserted by its tenants, and scared by the attempts of some mischievous travellers to rob their nest. Sir Humphrey Davy relates that during his visit to Killarney, he was sitting on the opposite cliff, and saw the two parent eagles fly from the nest, each carrying a young one on its back. They wheeled round and round in circles for some time, and then gently threw off the young ones for a little practice in flying. Soon afterwards they placed themselves under the young birds, and, receiving them on their backs, flew about with them as before, again and again repeating the lesson.”

FLIES.

“We ate our breakfast amidst a cloud of flies that defies description; the tea was scarcely poured out before our cups were full of them. They infest Egypt periodically. We were so much annoyed by them that we could not sit down to table.”

“The flies were in such myriads as to defy description. The table, walls, ceiling, and floor literally swarmed with them. I had scarcely lain down before I was covered with flies from head to foot. My eyes were very weak from the cold in my head, and they crawled into them in a dreadful manner.”

“It is shocking to see how many of the lower classes

are blind of at least one eye, chiefly, I believe, from want of cleanliness, and the innumerable flies with which they are covered. I was struck with horror at many of the miserable objects around me at Suez, several with their eyes covered with flies : they seemed almost unconscious of their presence, as they never attempted to brush them away. Poor little children seated across their mother's shoulders, had all of them three or four of these insects at the corner of each eye."—*Journey across the Desert.*

GIRAFFE.

When at Cairo, we went to visit "some fine giraffes, which we were anxious to see in their native clime. We entered the stable, and were allowed to go quite close to the pretty creatures. They were very tame and gentle, feeding out of our hands, and following us about wherever we went. I threw some clover on the ground, and it was curious to see the difficulty they had to reach it, being obliged to stretch their long forelegs far apart before they could lower their heads sufficiently. They were three in number ; and here they were, all life and frolic, their coats beautifully glossy, showing their leopard-like skins and bright eyes to the greatest advantage. An Italian gentleman, who has travelled much in the deserts of Nubia and the north of Egypt, tells me that he has often met these graceful animals ; and that there, although free to rove over trackless plains of unbounded liberty, they appeared quite gentle. He says they abound in the neighbourhood of Sennaar, and seldom herd more than three or four together : often a pair of old ones are to be seen with several of their young, of different ages, accompanying them."—*Journey across the Desert.*

HORSE.

“A young chestnut mare belonging to the Sheikh, was one of the most beautiful creatures I ever beheld. As she struggled to free herself from the spear to which she was tied, she showed the lightness and elegance of the gazelle. Her limbs were in perfect symmetry ; her ears long, slender, and transparent ; her nostrils high, dilated, and deep red ; her neck gracefully arched, and her mane and tail of the texture of silk. We all involuntarily stopped to gaze at her.”—LAYARD'S *Nineveh*.

HUNTING.

ILLUSTRATION OF GENESIS x. 9.

“The frequent representation of hunting scenes in the Assyrian sculptures is a proof of the high estimation in which the chase was held by the people. A conqueror and the founder of an empire was, at the same time, a great hunter. His courage, wisdom, and dexterity were as much shown in encounters with wild beasts as in martial exploits ; he rendered equal services to his subjects whether he cleared the country of wild beasts or repulsed an enemy. The scriptural Nimrod, who laid the foundation of the Assyrian empire, was ‘a mighty hunter before the Lord ;’ and the Ninus of history and tradition, the builder of Nineveh, and the greatest of the Assyrian kings, was as renowned for his encounters with the lion and leopard, as for his triumphs over warlike nations.”—LAYARD'S *Nineveh*.

LION.

“The lion is now rarely found on the banks of the Tigris as far north as Mosul, or even above Bagdad. That it was originally an inhabitant of the country, there can be no doubt. From the earliest period it was considered the noblest of game, and was included amongst the wild beasts preserved in the paradises, or parks, attached to the royal palaces. On the monuments of Nineveh, the triumphs of the king over this formidable animal are deemed no less worthy of record than his victories over his enemies. History and tradition, too, have celebrated the prowess of Ninus and Semiramis in their encounters with the lion ; and paintings representing these feats, adorned the palaces of Babylon. The Assyrian sculptor evidently delighted in such subjects, in which, indeed, his skill could be eminently displayed. He had carefully studied the animal, and, whilst he excelled in the delineation of its form, he portrayed its action and expression with wonderful spirit, faithfully preserving the character of the animal when springing with fury upon its assailant, or dying, pierced with arrows, at his feet. The lion of the sculptures is furnished with a long and bushy mane : it has been doubted whether the animal which still inhabits the country has this noble appendage ; but I have seen more than one on the banks of the Karoon provided with it. There is a peculiarity in the Asiatic lion which has not escaped the notice of the sculptor—the claw at the extremity of the tail. This claw was not unknown to ancient naturalists. . . . In modern times its existence was denied, and has only been established within a few years. It is still, I believe, considered to be a mere casual excrescence, and is not met with in all specimens of the animal.”—LAYARD'S *Nineveh*.

“The night of the 19th was to me rather a memorable one, being the first on which I heard the deep-

toned thunder of the lion's roar. . . . There was no mistake about it ; I at once knew, as if accustomed to the sound from my infancy, that the appalling roar which was uttered within half a mile of me, was no other than that of the mighty and terrible king of beasts. . . . There is something so noble and imposing in the presence of the lion, when seen walking free and undaunted on his native soil, that no description can convey an adequate idea of his striking appearance. Combining in comparatively small compass the qualities of power and agility, he is enabled easily to overcome and destroy almost every beast of the forest, however superior to him in weight and stature. Though considerably under four feet in height, he has little difficulty in dashing to the ground the lofty giraffe, whose head towers above the trees of the forest, and whose skin is nearly an inch in thickness. . . . The lion is generally diffused throughout the secluded parts of Southern Africa ; he is, however, nowhere found in great abundance, it being rare to find more than two or three families of lions frequenting the same district, and drinking at the same fountain. . . . The male lion is adorned with a long, rank, shaggy mane, which, in some instances, almost sweeps the ground. The colour of the mane varies, being sometimes very dark, and sometimes of a golden yellow. The females have no mane, but are covered with a short, thick, glossy coat of tawny hair.

“One of the most striking things connected with the lion is his voice, which is extremely grand, and peculiarly striking. It consists at times of a low deep moaning, repeated five or six times, ending in faintly audible sighs. At other times he startles the forest with loud, deep-toned, solemn roars, repeated five or six times in quick succession, each increasing in loudness to the third or fourth, when his voice dies away in low muffled sounds, very much resembling distant thunder. At times, a troop may be heard roaring in concert, one

assuming the lead, and two, three, or four more regularly taking up their parts. The habits of the lion are strictly nocturnal; during the day, he lies concealed beneath the shade of some low bushy tree, or wide-spreading bush, either in the level forest, or on the mountain side. He is also partial to lofty reeds, or fields of long, rank, yellow grass. From these haunts he sallies forth when the sun goes down, and commences his nightly prowling, and is ever most active and daring in dark and stormy nights, unwilling even to drink at the fountains by clear moonlight. Their eyes, in a dark night, glow like two balls of fire.

“The lioness is generally the most fierce, and when she has young ones, her mate is most to be dreaded, and knows no fear. One day, when out elephant-hunting with 250 men, a majestic lion slowly and steadily advanced towards us, with a dignified and undaunted bearing, the most noble and imposing that can be conceived, lashing his tail from side to side, and growling haughtily, his terribly expressive eye fixed upon us, and displaying his huge teeth. A headlong flight of the 250 men was the immediate result; but the dogs faced the lion, who, having put his enemies to flight, became anxious for the safety of his little family, with which the lioness was retreated in the background. Facing about, he followed after them with a haughty step, growling fiercely at the dogs which trotted along on either side of him.

“On my fourth hunting expedition, a horrible tragedy was acted one dark night in my little lonely camp; my most valuable servant being dragged from his bed, and quickly devoured by a lion. Lion-hunting, under any circumstances, is decidedly a dangerous pursuit.”
—See CUMMING’S *Hunter’s Life*, &c.

PIGEON-VILLAGES. ' .

“The most singular scenes that we witnessed were the Egyptian villages : numbers of these lie scattered on both banks of the river. They are generally built upon mounds of earth, either natural or artificial, to keep them above water during the inundation of the Nile, when their only means of communication is by boats. They are the most extraordinary looking habitations I ever beheld ; huddled together as closely as possible, and built almost upon each other. Many of them are high cones, appearing at a little distance like so many bee-hives. They are all of unbaked clay, and the only entrance is by means of a small hole, which will admit but one person at a time, crawling on all-fours. Every hamlet is interspersed with date-trees. Many of these collections of huts might be called with equal truth pigeon-villages, as well as human habitations. Where this is the case, almost every hut is conical, and of much greater elevation. On the top of each, several chatties are inserted in the clay, large enough to contain a pair of pigeons ; the mouths of these are left uncovered, and here they rear their young, the peasants occupying the lower part of the building. Many of these villages appeared quite swarming with their feathered inhabitants ; * and they looked, at a little distance, exactly like bees humming round their hives.”

—*Journey across the Desert.*

* Isaiah lx. 8.

PITS.

“Advancing on our road, we found many pits of about eight to ten feet in depth, and two to four feet in breadth, dug by the hunters for catching animals, especially elephants. A traveller at night would be sure to fall into them, as they are so illusively covered with grass and wood, that they cannot always be well distinguished, even in the day-time. . . . I should have fallen into one of the pits, if I had not been warned by Bana Kheri at a moment when I stood on the very brim. What a lesson to every Christian heart, not to love the lust of the flesh, nor the lust of the eyes, nor the pride of life, lest we fall into the abyss of everlasting perdition.”—*From a Missionary's Journal.*

PURPLE SHELL-FISH.

The sea about Tyre produced the fish out of which the colour called Tyrian purple was obtained. It is understood to have been of a medium hue, between brown and pure red, and very bright. The dyeing of this colour was found out by accident. A dog having seized the fish conchilis, or purpurea, it was observed that he had dyed his mouth with that beautiful colour, which henceforth became a mark of high estate, and is now the peculiar mourning of our sovereign princes. Pliny says, the Tyrians procured the liquor by taking off the shell of the larger fish, and by breaking the smaller in olive presses. Part of the blessing pronounced upon Zebulon and Issachar was, that those tribes should have “treasures hid in the sand,” Deut. xxxiii. 19; and, probably, the curious dyes which they found in the vicinity of Tyre, on which their land bordered, were among these treasures. Purple is often mentioned in Scripture.

SERPENTS.

AMOS v. 19.

While lodging in a large grain-warehouse, at Djouni Mr. Paton was “one day a good deal startled, on rising from a nap, by a loud cry from one of the attendants: on turning round, I perceived a serpent coiling itself among *the interstices of the stone wall of the grain-warehouse*. The boy, with great presence of mind, seized my walking-stick, which he inserted in the hole in the wall, and thus bruised the head of the serpent, until it dropped lifeless on the floor. It measured above a yard in length, and at the thickest part of the body between three and four inches in circumference.” —*Modern Syrians*, p. 51.

“The heats of summer had now commenced, and it was no longer possible to live in a white tent. The huts were equally uninhabitable, and still swarmed with vermin. In this dilemma I ordered a recess to be cut into the bank of the river (Tigris), where it rose perpendicularly from the water’s edge. By screening the front with reeds and boughs of trees, and covering the whole with similiar materials, a small room was formed. I was much troubled, however, with scorpions and other reptiles, which issued from *the earth forming the walls of my apartment*; and later in the summer, by the gnats and sand-flies which hovered on a calm night over the river.” —LAYARD’S *Nineveh*.

SPIDER.

JOB viii. 13, 14.

“The hypocrite’s hope shall perish: whose hope shall be cut off, and whose trust shall be a spider’s web.”

“In riding across the plains, we were particularly struck to see, on the little low bushes all around our path, innumerable webs, the work of innumerable spiders, and of such apparent strength and consistency, that they might have been mistaken at first sight for cambric pocket-handkerchiefs; they were quite as large, and nearly as white. The spiders themselves were of course of a corresponding order of greatness. These magnificent webs seemed to promise something at first; but when touched, they were, like all others, fragility itself.”—*Bible in Palestine*, p. 164.

UNICORN (RHINOCEROS, BUFFALO, ORYX).

“The road got soon so much obstructed by the euphorbia (Abyssinian Kolqual) and wild aloe, that I could not use my ass; and as we could not get clear of this jungle before night broke in upon us, we cleared away the wood, and took up our encampment, which we surrounded with mighty fires, as we were aware of the rhinoceroses, whose marks we saw at many places of the jungle. This wild beast likes the thickest and most impassable parts of a jungle, or forest covered with euphorbia, acacia, and aloe, of which other animals, except the elephant, are afraid. The elephants like the pools, and places of high grass, near the forest, into which they run when hunted. The buffalo likes clear ground, where there is some tender grass, and only thin acacia bushes. Thus, every animal has its spot suited to its peculiarity; and it is a fact which struck me often, that, from the nature and appearance of a place, I could tell my people with what kind of animals we probably would meet. . . . The

thickness of the jungle in which the rhinoceros generally lives, accounts for the great danger to which the hunter is exposed, as there is no other road but that which was made by the beast itself; consequently the hunter or traveller has no room for his escape if pursued by the monster.

“*July 18.*—Under the wings of my Almighty Protector, I had passed the night in perfect safety; so much so that, at the break of day, I thought every danger that we might be likely to incur in this dreadful jungle was passed, when, after many windings and turnings of our merciless way, on which the pricks of euphoria and aloe pierced through my clothes, and made me and my people frequently cry aloud from pain, we heard something like a squeak, and on a sudden the foremen of our little caravan threw down their loads upon the ground, and ran backward toward me, who was some sixteen or twenty yards behind. Some endeavoured to ascend trees, whilst others ran to and fro, and could find no entrance into the thicket. For a moment I could not learn what the cause of their bustle and confusion was, until I heard that the foremen had seen a big rhinoceros staring in their face by the wayside. I took up my gun, and took a stand in the direction in which it was supposed it would make its appearance. There was only one way left to the beast, either to go forward or backward, and thus to overrun us altogether. Whilst I watched the slightest motion of the bushes, whither I could get a look at the animal, and aim at the proper spot of its bulky body, Bana Kheri fired his musket at random, when the ass, whose keeper had run off, to save himself, was frightened, and escaped with the saddle, stirrups, and the bridle in his mouth. When I ordered my porters to go in search of the ass, they either refused to go at all, from over great fear, or made only a slight attempt, to the distance of a few hundred yards. I therefore went myself, with two men, but having been led astray to side ways made by the rhino-

ceros, we became apprehensive of our being entirely separated from our cafila. I therefore thought it necessary to leave the ass to his fate for the sake of our own safety, and join our people, which we finally effected by making an outcry, which was responded to by our party watching the baggage. I felt, indeed, grieved at having lost my useful animal by the stupid fear of my porters, to whom I had previously given strict orders to keep quiet, and not be out of their wits at the aspect of a wild beast. But all warning is in vain with Asiatics and Africans : they lose instantly their head in time of perplexity. However, I felt thankful to God for the preservation of human life, so much exposed on this occasion.”—*From a Missionary's Journal.*

“Of the rhinoceros there are four varieties in South Africa, distinguished by the Bechuanas by the names of the Borèlé, or black rhinoceros ; the Keitloa, or two-horned black rhinoceros ; the Muchocho, or common white rhinoceros ; and the Kobaoba, or long-horned, white rhinoceros. Both varieties of the black rhinoceros are extremely fierce and dangerous, and rush headlong and unprovoked at any object which attracts their attention. They never attain much fat, and their flesh is tough, and not much esteemed by the Bechuanas. Their food consists almost entirely of the thorny branches of the wait-a-bit thorns. Their horns are much shorter than those of the other varieties, seldom exceeding eighteen inches in length. They are finely polished with constant rubbing against the trees. The skull is remarkably formed, its most striking feature being the tremendous thick ossification in which it ends above the nostrils. It is on this mass that the horn is supported. The horns are not connected with the skull, being attached merely by the skin, and they may thus be separated from the head by means of a sharp knife. They are hard and perfectly solid throughout, and are a fine material for various articles, such as drinking-cups, mallets for rifles, handles for turner's tools, &c. The

horn is capable of a very high polish. The eyes of the rhinoceros are small and sparkling, and do not readily observe the hunter, provided he keep to leeward of them. The skin is extremely thick, and only to be penetrated by bullets hardened with solder. During the day the rhinoceros will be found lying asleep or standing indolently in some retired part of the forest, or under the base of the mountains, sheltered from the power of the sun by some friendly grove of umbrella-topped mimosas. In the evening they commence their nightly ramble, and wander over a great extent of country. They usually visit the fountains between the hours of nine and twelve o'clock at night, and it is on these occasions that they may be most successfully hunted, and with the least danger. The black rhinoceros is subject to paroxysms of unprovoked fury, often ploughing up the ground for several yards with its horn, and assaulting large bushes in the most violent manner. On these bushes they work for hours with their horns, at the same time snorting and blowing loudly, nor do they leave them in general until they have broken them into pieces. The rhinoceros is supposed by many to be the animal alluded to by Job, chap. xxxix. verses 10, 11, where it is written : 'Canst thou bind the unicorn with his band in the furrow? or will he harrow the valleys after thee? Wilt thou trust him because his strength is great? or wilt thou leave thy labour to him?' evidently alluding to an animal possessed of great strength and of untameable disposition, for both of which the rhinoceros is remarkable. All the four varieties delight to roll and wallow in mud, with which their rugged hides are generally encrusted. Both varieties of the black rhinoceros are smaller and more active than the white, and are so swift that a horse with a rider on his back can rarely overtake them. Both varieties of the white rhinoceros are similar in habits They attain an enormous size, being the animals next in magnitude to the elephant. They feed solely on grass, carry much fat, and their flesh is ex-

cellent, being preferable to beef. They are of a much milder and more inoffensive disposition than the black rhinoceros, rarely charging their pursuer. Their speed is very inferior to that of the other varieties, and a person well mounted can overtake and shoot them."

BUFFALO.

"We passed numerous herds of extremely fine buffaloes, twice the size of those in Ceylon, and very handsome, with splendid horns and large-boned legs. Several were bathing and rolling about in the river, which they seemed to enjoy exceedingly. We often saw them half-way across, with their noses and horns alone visible above the water. It was curious to watch these huge creatures climbing up and down the almost perpendicular banks. I constantly expected to see one roll over; but they felt their way before them in the most careful possible manner, without making a single false step.

"Every now and then, we observed groups of magnificent Egyptian cattle led down to water. They are larger and finer than even our best English breed; their colour is usually red."—*Journey across the Desert.*

ORYX.

"The oryx, or gemsbok, is about the most beautiful and remarkable of all the antelope tribe. It is the animal which is supposed to have given rise to the fable of the unicorn, from its long straight horns, when seen in profile, so exactly covering one another as to give it the appearance of having but one. It possesses the erect mane, long sweeping black tail, and general appearance of the horse, with the head and hoofs of the antelope. It is robust in its form, squarely and compactly built, and very noble in its bearing. Its height is about that of an ass, and in colour it slightly resembles that animal. Beautiful black bands adorn its head. The

gemsbok was destined to adorn the parched karroos and arid deserts of South Africa, for which description of country it is admirably adapted. Burning as is the climate, it is independent of water. Its flesh is deservedly esteemed. The oryx is so swift, that I only remember four occasions when, alone and unassisted, I succeeded in riding it to a stand-still.”—CUMMING’S *Hunter’s Life in South Africa*.

Mr. Layard writes that he was at one time inclined to think that the wild bull, so frequently represented on the Assyrian sculptures, might be the unicorn, or *raim*, so often alluded to in the Scriptures as an animal renowned for its strength and ferocity, and typical of power and might. “But,” he adds, “the unicorn of the Scriptures is now, I believe, generally identified with a large and fierce antelope, or oryx, inhabiting Arabia and Egypt. Professor Migliarini, of Florence, informs me that THE WORD *Raim* ITSELF OCCURS IN HIEROGLYPHICS OVER A FIGURE OF THIS ANTELOPE, IN AN EGYPTIAN SCULPTURE ; and he conjectures that the Jews derived a knowledge of the animal, as well as its name, from the Egyptians.”—LAYARD’S *Nineveh*.

THE ZIC-ZAC.

“As I am on the subject of birds, I will relate a fact in natural history which I was fortunate enough to witness, and which, although it is mentioned so long ago as the time of Herodotus, has not, I believe, been often observed since ; indeed I have never met with any traveller who has himself seen such an occurrence.

“I had always a strong predilection for crocodile shooting, and had destroyed several of these dragons of the waters. On one occasion, I saw, a long way off, a large one, twelve or fifteen feet long, lying asleep under a perpendicular bank about ten feet high on the margin

of the river. I stopped the boat at some distance, and noting the place as well as I could, I took a circuit inland, and came down cautiously to the top of the bank, when, with a heavy rifle, I made sure of my ugly game. I had already cut off his head in imagination, and was considering whether it should be stuffed with its mouth open or shut. I peeped over the bank. There he was, within ten feet of the sight of the rifle. I was on the point of firing at his eye, when I observed that he was attended by a bird called a zic-zac. It is of the plover species, of a greyish colour, and as large as a small pigeon.

“The bird was walking up and down close to the crocodile’s nose. I suppose I moved, for suddenly it saw me, and instead of flying away, as any respectable bird would have done, he jumped up about a foot from the ground, screamed ‘Zic-zac ! zic-zac !’ with all the powers of his voice, and dashed himself against the crocodile’s face two or three times. The great beast started up, and immediately spying his danger, made a jump up into the air, and dashing into the water with a splash which covered me with mud, he dived into the water and disappeared. The zic-zac, to my increased admiration, proud apparently of having saved his friend, remained walking up and down, uttering his cry, as I thought, with an exulting voice, and standing every now and then on the tips of his toes in a conceited manner, which made me justly angry with his impertinence.

“After having waited in vain for some time, to see whether the crocodile would come out again, I got up from the bank where I was lying, threw a clod of earth at the zic-zac, and came back to the boat, feeling some consolation for the loss of my game in having witnessed a circumstance, the truth of which has been disputed by several writers on natural history.” — CURZON’S *Monasteries in the Levant*.

PART II.

SHEEP AND SHEPHERDS.

BROAD-TAILED SHEEP.

GOAT'S MILK. — FLOCKS OF
GOATS.

ILLUSTRATIONS OF LEVITICUS

xxvii. 32; 1 Cor. ix. 7;

PSALM xxiii.

SHEEP AND SHEPHERDS.

“It was evening at Zib,* and the bleating of flocks attracted my attention. As I looked up the roadway, a cloud of dust announced the coming multitude. They were *sheep and goats unseparated, preceded by their shepherd, carrying a lamb in his arms*, who often turned round and called the leaders *by their names*, and they *hearing and knowing his voice*, quickened their pace at his words. He led them into the rude circular fold, made of thorns, almost in front of our tents, which they entered by means of the one only door, at which the shepherd stood *counting them as they went in*. Without was the dog keeping guard, and at the door of the fold lay the shepherd himself: *none could enter into the door but by him*. In the morning they were gone early, even before we rose, which was about five o'clock, and on inquiry of our muleteers, who had been talking with the shepherd, they told me that he kept his flock at night in this sheepfold for *fear of robbers and jackals*, for they were *his own sheep*, and he was gone out to *find pasture* with them by the *side of a still stream* about an hour's distance.” — WOODCOCK'S *Scripture Lands*.

* Zib—perhaps the Achzib of the Book of Joshua—a poor village between three and four hours north of Acre.

BROAD-TAILED SHEEP.

Herodotus describes the Arabian sheep as having immense tails. "One has a large tail, not less than three cubits in length, which, if suffered to trail, would ulcerate. The shepherds, therefore, make little carts to support it. The other has a tail nearly a cubit in breadth." This broad tail is mentioned in Leviticus iii. 9, vii. 3, where it is translated "the rump."—LAYARD'S *Nineveh*.

 GOAT'S MILK.

"Goat's milk is more used (in Damascus) than that of the cow ; and the milkman, instead of going round with his pails, brings his goat to the door of his customer, and the amount required is drawn from the pap of the animal."—*Modern Syrians*, p. 192.

FLOCKS OF GOATS.

"We soon arrived at a noble well, where the shepherds were collecting their flocks to the watering ; it was truly a patriarchal sight. An immense flock of goats covered the precipitous side of the mountain (Lebanon), near the well ; and were preparing slowly to move downwards. Solomon's language appeared to us here most appropriate and beautiful (Cant. iv. 1) ; and the hair of these creatures is exceedingly smooth and glistening."—*Bible in Palestine*, p. 488.

ILLUSTRATION OF LEVITICUS xxvii. 32.

The rabbins say, that when a man gave the tithe of his sheep or calves, he shut them in one fold, in which was a narrow door to let out but one at a time. He then stood by the door, with a rod dipped in vermilion in his hand, and as they passed he counted them with the rod ; and when the tenth came he touched it, by which it was distinguished as the tithe calf, sheep, &c.

ILLUSTRATION OF 1 CORINTHIANS ix. 7.

“It is customary for the inhabitants of Mosul possessing flocks to confide them to the Haddedeem Arabs, who take them into the desert during the winter and spring, and pasture them in the low hills to the east of the town during the summer and autumn. The produce of the sheep, the butter and wool, is divided between the owner and the Arab in charge of them ; the sour milk, curds, &c. are left to the latter.”—LAYARD’S *Nineveh*.

ILLUSTRATION OF PSALM xxiii.

“At length, meeting with a well of excellent water, we stopped to refresh ourselves and our weary animals. Long and repeated draughts of the reviving element were quaffed by each of us, from the skin bottle, whilst our horses were regaling themselves around the hollow drinking-stone. Numerous Arabs, in motley groups, were sitting on their heels, and smoking their pipes. Their mules, eased of their burdens, were reclining around them in the shade. It seemed a general place for a rest ; and we were, therefore, forcibly reminded of David’s expression, ‘He leadeth me beside the *still waters* :’ literally, the waters of resting, or lying down, *i.e.* waters near which the cattle *lie down to rest at noon*. There could scarcely be a more delightful image, in these eastern countries.”—*Bible in Palestine*, pp. 190, 191.

PART III.

APPLES OF SODOM.	MULBERRY.—ILLUSTRATION OF
CAPER.	2 SAM. v. 24.
CAROB-TREE.	MYRTLE.
CASTOR-OIL-NUT TREE (Jonah's	OLEANDER.
Gourd).	OLIVE.—ILLUSTRATION OF Ps.
CEDAR.	cxxviii. 3.
CINNAMON.	ORANGE.
COTTON.	POMEGRANATE.
FIG-TREE. — ILLUSTRATION OF	RETEM.
JOHN i. 48.	RICE.
FITCHES.	SCARLET.
FRANKINCENSE.	SPIKENARD.
GHURKUD.	TARE.
GINSENG (probably PANNAG).	THORNS — NUBK — THORN-
LILIES OF THE FIELD.	HEDGES.
MANNA.	TREE NEAR HEBRON.
MELONS, &c.	VINEYARDS.
MYRRH.	ZUKKUM.

APPLES OF SODOM.

THE Hon. R. Curzon met with a kind of gall-apple, produced by an insect upon a kind of Ilex-tree, of which he gives the following account : “ It was a remarkably hot and sultry day : we were scrambling up the mountain through a thick jungle of bushes and low trees, which rises above the east shore of the Dead Sea, when I saw before me a fine plum-tree, loaded with fresh blooming plums. I cried out to my fellow-traveller, ‘ Now, then, who will arrive first at the plum-tree ? ’ and we both pressed our horses into a gallop. . . . We arrived at the same moment ; and each snatching up a fine ripe plum, put it at once into our mouths ; when,

on biting it, instead of the cool, delicious, juicy fruit which we expected, our mouths were filled with a dry bitter dust, and we sat under the tree, upon our horses, sputtering and hemming, and doing all we could to be relieved of the nauseous taste of this strange fruit."

CAPER.

"We saw great quantities of the caper-bush in flower (on the banks of the river Tigris)."—RICH'S *Koordistan*.

Writing from Malta, Mrs. Griffith observes: "From every crevice in the walls hung clusters of the caper-plant. The flower is exceedingly beautiful; it has four large white petals, with a quantity of long lilac stamens. The leaf is nearly round: the flower-bud is the part that is pickled and eaten in sauce."

Writing of the ruins of the amphitheatre at Syracuse, the same author remarks: "The caper, and many other pretty creepers and flowers, now clothe the walls deserted by man."

CAROB-TREE.

"We saw a splendid carob, or locust-tree. It bears a fruit like a bean, but flatter, containing some small seeds: the shell, when dry, is eaten, and has rather an agreeable flavour. The few pigs there are now in Syria are also still fed with it. The tree was covered with the podded fruit, and the ground beneath strewn with it; for it is abundantly shed, as soon as ripe. And it is called the *husk-tree* now."—*Bible in Palestine*.

CASTOR-OIL-NUT TREE (JONAH'S GOURD).

“The ricinus, or castor-oil plant, is cultivated all over Koordistan ; sometimes in separate fields, sometimes mixed with cotton. A great quantity of the castor-oil plant is cultivated. The oil is used for burning, and is said to be efficacious for bruises ; but I never met with any Orientals who were acquainted with its medicinal qualities.”—RICH'S *Koordistan*.

CEDAR.

Cedars of great size and beauty grow in Japan. A Portuguese missionary, who was in the country in 1565, vividly describes the approach to one of the temples, which was through an avenue of pines and cedars intermixed, the trees uniting overhead, so as entirely to exclude the heat and glare of the hot summer sun. Some of the cedars he measured were more than eighteen feet in girth. The roof of the temple was supported by ninety columns of cedar, of prodigious height, regular in the stem, and perfectly round.

CINNAMON.

“We drove through the far-famed cinnamon gardens, which cover upwards of 17,000 acres of land on the coast, the largest of which are near Colombo. The plant thrives best in a poor sandy soil, in a damp atmosphere. It grows wild in the woods to the size of a large apple-tree, but when cultivated is never allowed to grow more than ten or twelve feet in height, each plant standing separate. The leaf is something like

that of the laurel in shape, but of a lighter colour ; when it first shoots out it is red, and changes gradually to green. It is now out of blossom, but I am told that the flower is white, and appears when in full blossom to cover the garden. After hearing so much of the spicy gales from this island, I was much disappointed at not being able to discover any scent, at least from the plants, in passing through the gardens. There is a very fragrant-smelling flower growing under them, which at first led us into a belief that we smelt the cinnamon, but we were soon undeceived. On pulling off a leaf or a twig, one perceives the spicy odour very strongly, but I was surprised to hear that the flower has little or none. As cinnamon forms the only considerable export of Ceylon, it is of course preserved with great care ; by the old Dutch law, the penalty for cutting a branch was no less than the loss of a hand : at present a fine expiates the same offence. The neighbourhood of Colombo is particularly favourable to its growth, being well sheltered, with a high equable temperature ; and as showers fall very frequently, though a whole day's heavy rain is uncommon, the ground is never parched. The manager of the groves sent some of the cinnamon-peelers to our bungalows, that we might see the way in which the spice is prepared. They brought with them branches of about three feet in length, of which they scraped off the rough bark with knives, and then, with a peculiar shaped instrument, stripped off the inner rind in long slips ; these are tied up in bundles, and put to dry in the sun, and the wood is sold for fuel. In the regular preparation, however, the outer bark is not scraped off ; but the process of fermentation which the strips undergo when tied up in large quantities, removes the coarse parts. The peelers are called "Chaliers ;" they are a distinct caste, whose origin is uncertain, though they are generally supposed to be descended from a tribe of weavers, who settled in Ceylon, from the continent, about 600 years ago. In the interior they

now pursue their original occupation, but those in the maritime provinces are exclusively employed in peeling cinnamon. They earn a great deal of money during the season ; but their caste is considered very low, and it would be a degradation for any other to follow the same business.”—BISHOP HEBER’S *Journal*.

COTTON.

“Cotton must never be sown twice running in the same ground.”—RICH’S *Koordistan*.

In his “Travels in Koordistan,” Mr. Rich writes : “The inhabitants of all the villages we passed were out gathering cotton, which was a very pleasant and cheerful sight.”

Cotton is planted in considerable quantities along the banks of the river Tigris.

“Large tracts (in Malta) were covered with crops of the cotton-plant, now in full bloom. The flower is generally deep yellow or orange, and contrasts beautifully with the bright green leaves. The plants are about a foot and a half in height.”—*Journey across the Desert*.

FIG-TREE.

ILLUSTRATION OF JOHN i. 48.

To understand the full import of this passage, a person must have seen one of these noble trees. For though bare in the extreme of winter, it is so thickly covered with leaves in the spring and summer, and those of so immense a size, as to form such a complete shelter, that no distant eye can penetrate it. It was under one of these trees that Nathanael had been wrestling in prayer. But even here the Saviour, omniscient, as God, has wit-

nessed him : and Nathanael was convinced at once from his assertion, that he must be the Divine and the promised Messiah. Under the shade of a very large fig-tree on the plain of Gennesareth, we were glad to repose ourselves awhile from the heat of the sun. There is something peculiarly delightful in the shade of the fig-tree. We had experienced this in Italy ; but here much more so. It is greatly superior to the shelter of a tent. The heavy foliage completely excludes the heat of the sun, and yet the air gently creeps through its branches. At the foot of the tree, a lovely rivulet of delightful water gushes out from beneath the rocks, and falls into the lake at a short distance. Here we slaked our thirst.”—*Bible in Palestine*, pp. 115, 116.

“The fig-trees (in Malta) seem to bear two-thirds of the year, and are literally weighed down with their green and purple harvest. The latter are the largest and finest to the eye ; but I prefer the flavour of the green, as the sweetest and most delicate.”—*Journey across the Desert*.

FITCHES.

It is probable that the seed rendered *fitches* in Isaiah xxviii. 25, 27, is the *Nigella*, of which Belon states that it furnishes the black seeds so generally sprinkled on bread in Egypt.

It is a plant commonly met with in gardens, and grows to a cubit or more in height, according to the richness of the soil. The leaves are small, like those of fennel ; the flower blue, which, disappearing, the seed-vessel shows itself on the top, like that of a poppy, furnished with little horns, oblong, divided into several partitions or cells, in which are enclosed seeds of a very black colour, not unlike those of the leek, but of a very fragrant smell.

Rusks and biscuits, strewed on the top with the seeds of sesamum, coriander, and wild garden saffron, are commonly eaten in the East—just as we strew small cakes, &c. with the seeds of the caraway.

It is somewhat uncertain what the fitches of Ezekiel (iv. 9) were, as some translators render the original word by “spelt,” and others think that the “vetch” is intended (see p. 199).

FRANKINCENSE.

Frankincense was doubtless imported through the medium of the Arabs, as is intimated in Jer. vi. 20, and as is expressly stated by Herodotus.

GHURKUD.

“One of the Arabs ran beside my camel, and presented me with some small red fruit, somewhat resembling the grains of a pomegranate. They were of a fresh acid flavour, not unlike the common red currant. The Arabs eat this refreshing fruit abundantly, and sometimes make it into a sort of conserve.”—FISK’s *Pastor’s Memorial*.

GINSENG.

“We inquired after the *ginseng*, and learned that it is found only in two parts of the mountains between China and Corea, where beasts of prey so abound as to render *ginseng* gathering a perilous business. The gatherers must begin by hunting the tigers.”—*Manners and Customs of the Japanese*.

LILIES OF THE FIELD.

Mr. Salt, in his "Voyage to Abyssinia," says : " We discovered a new and beautiful species of amaryllis, which bore from 10 to 12 spikes of bloom on each stem, springing from one common receptacle. The general colour of the corolla was white, and every petal was marked with a single streak of bright purple down the middle. The flower was sweet-scented, and its smell, though much more powerful, resembled that of the lily of the valley. This superb plant excited the admiration of the whole party, and it brought immediately to my recollection the beautiful comparison " (in Matthew vi. 28—30). The fields of the Levant are overrun with another species of the same flower, whose golden lilaceous flowers in autumn afford one of the most brilliant and gorgeous objects in nature. The lily spoken of in Cant. v. 13, was red, and distilled a certain liquor. The Crown Imperial, or Persian lily, which grows naturally in that country, sometimes has yellow flowers, but those with red ones are most common ; they are always bent downwards, and disposed in the manner of a crown at the extremity of the stem, which has a tuft of leaves at the top. At the bottom of each leaf of this flower is a certain roscid humour appearing in the form of a pure drop of water.

MANNA.

" Manna is found on the dwarf oak ; it is collected by gathering the leaves of the tree, letting them dry, and then gently threshing them on a cloth. It is thus brought to market in lumps, mixed with an immense quantity of fragments of leaves, from which it is afterwards cleared by boiling.

“There is another kind of manna found on rocks and stones, which is quite pure, of a white colour, and it is much more esteemed than the tree manna. The manna season begins in the latter end of June, at which period, when a night is more than usually cool, the Koords say it rains manna, and maintain that the greatest quantity is always found in the morning after such a night.”—RICH’s *Koordistan*.

MELONS.

“Water-melons are cultivated in every spot of low land (in Egypt), often on the sandy banks of the river itself. It is singular to see them growing; many appeared to be three or four times the size of a man’s head, and each bed was loaded with fruit.”

“We sent our servant to purchase a water-melon: it was almost too heavy for one man to carry. The rind was of a light green colour, and quite smooth; some of them are of a very dark green, and rough. G—— proceeded to cut some gigantic slices, upon which we feasted. The inside was of the most delicate pink, becoming white towards the rind, not partaking of the melon flavour, but rather approaching that of the cucumber. It was deliciously cold, juicy, and refreshing. The hollow in the centre was filled with a rose-coloured juice, of which we took two or three tumblers-full, mixed with a little white sugar, and found it very agreeable. There was an immense quantity of large black seeds in it; those of the dark green water-melon are white. The flavour of the former is by far the finest.”—*Journey across the Desert*.

“What struck me most was the abundance of stalls and bazaars, piled up with immense supplies of water-

melons, cucumbers of enormous length and size, and other fruits of the season, of which the people eat abundantly, even while walking in the streets, or sitting in parties in the dust. As we approached nearer to the suburbs, great numbers of men and women were entering the city (Cairo), bearing vast additional contributions of these various kinds of fruit, so adapted to the climate and the simple wants of the people. I thought of the children of Israel."

"There is occasionally found in the desert of Suez, a kind of gourd exceedingly bitter, and used in medicine. It is *colocynth*. At this season of the year these gourds have a dry, light-brown surface; and when gathered, the loose seeds rattle as if shut up in a box. I looked down from my camel, as I passed some of these which were thoroughly ripened, and wished to procure one as a specimen; but I passed on, to avoid the trouble and delay of dismounting. In a few minutes, I felt some one pulling the skirt of my mantle, and there was my young Arab friend, with his sunny countenance, and one of the ripe gourds rattling in his hand, which he presented to me. He had quickly perceived my wish as I glanced at the gourds in passing. Here was good breeding—in the wilds of the desert."—FISK'S *Pastor's Memorial*.

MULBERRY.

ILLUSTRATION OF 2 SAMUEL v. 24.

"Our neighbours had the care of a large mulberry-garden, which, when the trees are in full leaf, is a very pleasant sight. But when the silkworms commenced their operations, all this refreshing verdure soon disappeared; for these little creatures are very voracious. The house in which this numerous spinning colony was

seated, was of very simple construction, formed of dried reeds or rushes. . . . We saw the silk wound from the cocoons. This was performed out of doors, in a little hut. Their simple machinery was soon set up, and kept in motion, day and night, till all the cocoons were unravelled . . . We have no evidence that the Israelites, in very early times, had any knowledge of silk, the word thus translated meaning rather some kind of fine linen, or cotton cloth.”—*See Bible in Palestine.*

“The silk is unwound by a large wheel, which is kept going day and night, each person bringing his silk, the produce of his garden, to be unwound, as corn is brought to the miller to be ground. There are numbers of these wheels about Beyrout, and during the season their noise when near at hand is very disagreeable.”—WOODCOCK’S *Scripture Lands.*

“As we were surrounded by mulberry gardens, we had soon an opportunity of observing the following most interesting circumstance. Every morning, about ten o’clock, a gentle breeze sprung up, and a rustling motion commenced in the top of these trees, even though the leaves of all other trees were as still as possible. Does not this beautifully exemplify ‘. . . the sound of going in the tops of the mulberry-trees?’”—*Bible in Palestine*, p. 496.

From the bark of the mulberry-tree the Japanese make much of their curious paper, as also ropes, matches, coarse stuffs for dresses, &c.

MYRRH.

The taste of myrrh is extremely bitter ; but its smell, though strong, is not disagreeable, and among the ancients it entered into the composition of the most costly ointments ; as a perfume, it appears to have given a pleasant fragrance to vestments, and to have been

carried by females in little caskets in their bosoms. The ancient Jewish writers tell us that a little frankincense in a cup of wine (Prov. xxxi. 6) was given to criminals going to execution, to stupify the feeling of pain ; and perhaps this mixture is alluded to in the following passages :—Psalm lx. 3 ; lxxv. 8 ; Isai. li. 17, 22 ; Jer. xxv. 15, 17, 28. It was for this reason, doubtless, that wine mingled with myrrh was offered to our blessed Lord, who refused thus to diminish his terrible sufferings. Myrrh was amongst the chief ingredients for embalming the dead. (John xix. 39.)

MYRTLE.

“ We met a small Koordish caravan, laden with myrtle packed in bags ; it gave out a delicious fragrance. It is, I believe, used in the dyeries.”—RICH’S *Koordistan*.

“ In the gardens of Rhoda (Egypt) the most prevalent shrub is the luxuriant myrtle, covered with its odoriferous white blossom, and generally exceeding eight feet in height. The whole garden is intersected by hedges of this beautiful plant.”—*Journey across the Desert*.

OLEANDER.

Traversing the plain of Gennesareth, “several fine streams crossed our path, as they flow through it from the neighbouring hills. . . . The red blossoming oleander is so abundant, that we had often to force our way through the thick clusters, and to beat them down with our horses’ feet. They make a splendid figure.”—*Bible in Palestine*, pp. 113, 114.

OLIVE.

ILLUSTRATION OF PSALM cxxviii. 3.

“The family consisted of four generations. The eldest son, and his wife, were living in the father’s house, according to patriarchal usage. This is very common here. Children and grandchildren are seen clustering ‘like olive plants’ around the general ‘table,’ till the increase often amounts to seven or eight families.”—*Bible in Palestine*.

ORANGE.

“On leaving Nablous, the sun had risen brilliantly on a cloudless sky, and as we traversed the gardens, his rays falling upon the fruits of the orange-tree made them appear like ‘apples of gold.’ The luxuriant foliage of the trees around us looked like ‘silver,’ and upon the grass it was as if we could gather diamonds.”—*Jewish Intelligence*, Sept. 1849.

POMEGRANATE.

A visitor to Malta writes of “. . . the glorious groves of pomegranates, which, overhanging the vine-clad walls, displayed their scarlet and golden fruit from between their dark-green leaves. I never beheld anything so beautiful or so luxuriant.”—*Journey across the Desert*.

RETEM.

“The shade afforded by the tall and spreading branches of the retem, is very cheering and refreshing, and often quite enough to protect against the hottest sunbeams.”—*FISK’s Pastor’s Memorial*.

RICE.

ILLUSTRATIONS OF ECCLES. xi. 1, AND ISAIAH xxxii. 20.

Rice is a plant very much resembling wheat in its shape and colour, and the figure and disposition of its leaves, but it has a thicker and a stronger stalk. Its seed is extremely farinaceous. It thrives only in low, damp, and marshy lands, when they are even a little overflowed. In Egypt, the rice is sown *upon the water*; before sowing, while the earth is covered with water, they cause the ground to be trodden *by oxen, horses, and asses*, who go midleg deep; and this is the way of preparing the ground for sowing. As they sow the rice on the water, they transplant it in the water. What beautiful light this casts upon the above-mentioned passages in Scripture! Rice may well be called *bread*, for it is “the food of two-thirds of mankind,” and is eaten to an extraordinary extent in most Eastern countries. Blessed are they who sow the precious seed of Gospel truth “beside all waters,” and send forth labourers of varied rank and ability, all to join together in the great work!

“The valleys between the hills” in Ceylon “are cultivated with rice; and indeed it is in these mountainous regions, I am told, that the greatest quantity is grown, on account of the facilities they afford for irrigation. The fields in which it is sown are dammed up, and form a succession of terraces, the plant in each, perhaps, being in a different stage of growth. Sometimes the water is conveyed for a mile or two along the side of a mountain, and it is let off from one terrace to another, as the state of the grain requires it. The verdure of the young rice is particularly fine, and the fields are really a delightful sight, when surrounded by, and contrasted with the magnificent mountain scenery.”—BP. HEBER’S *Journal*.

Rice is the main food of the inhabitants of Japan. It is grown in the low country, and said to be the best in all Asia. It is perfectly white, and so nourishing and substantial, that foreigners not used to it can eat but little of it at a time. The rice grown in the upper grounds, where irrigation is difficult, is of an inferior quality.

SCARLET.

ISAIAH i. 18.

The *scarlet* colour, frequently mentioned in Scripture, “was a different colour from the shell-fish purple, and was extracted from the insects, or their eggs, found on a species of oak. The cotton cloth was dipped in this colour twice. Hence the application of the words, *twice dyed*. ‘Though your sins be as *scarlet*,—’ the original is, *double-dyed*.”—*Bible in Palestine*, p. 49.

SPIKENARD.

Many of the plants of the Valerian tribe “possess properties worthy of notice, but by far the most remarkable is *Valeriana Japamansi*, the spikenard of Scripture, and the *nardus* of the ancient classical authors. It grows on the hills of Butan, in India. The root-leaves, shooting up from the ground, and surrounding the young stem, are torn up, along with a part of the root, and having been dried in the sun, or by artificial heat, are sold as a drug. Two merchants of Butan, of whom Sir W. Jones caused inquiries to be made, related, that the plant shoots up straight from the earth, and that it is then, as to colour, like a green

ear of wheat ; that its fragrance is pleasant, even while it is green, but that its odorous quality is much strengthened by merely drying the plant ; that it grows in Butan on hills, and even on plains, in many places ; and that in that country it is gathered and prepared for medicinal purposes. In ancient times, this drug was conveyed by way of Arabia to southern Asia, and thus it reached the Hebrews. Judas valued the box of ointment with which Mary anointed our blessed Lord's feet at two hundred denarii,—6*l.* 9*s.* 2*d.* By the Romans, it was considered so precious, that the poet Horace promises to Virgil a whole *cadus*, or about three dozen modern bottles, for a small onyx-box full of spikenard. It was a Roman custom, in festive banquets, not only to crown the guests with flowers, *but also to anoint them with spikenard*. Eastern nations procure from the mountains of Austria other kinds of valerian to perfume their baths. Their roots are grubbed up with danger and difficulty, by the peasants of Styria and Carinthia, from rocks on the borders of eternal snow ; they are then tied in bundles, and sold at a very low price to merchants, who send them, by way of Trieste, to Turkey and Egypt, where they are retailed at a great profit, and passed onwards to the nations of India and Ethiopia. The seeds of one kind of valerian were used in former times in the process of embalming the dead ; and some, thus employed in the twelfth century, on being removed from the cere cloth in the present century and planted, have vegetated. The roots of our common valerian are still used in medicine.”—REV. C. A. JOHNS' *Flowers of the Field*.

Some have thought the attar of roses was the Scripture spikenard, as the following extract shows :—

“ With respect to the nard, or spikenard, of Solomon's Song, the modern Arabic name seems to indicate the *rose*. Indeed, the notice of the *nard*, in Mark, is sufficiently descriptive of the essential oil or attar of roses.”

Of this attar Bishop Heber writes :—

“ Ghazee-poor is celebrated throughout India for the beauty and extent of its rose-gardens, or fields. They occupy many hundred acres in the neighbourhood. They are cultivated for distillation, and for making ‘attar.’ The attar is obtained after the rose-water is made, by setting it out during the night and till sunrise in the morning, in large open vessels exposed to the air, and then skimming off the essential oil which floats at the top. The rose-water which is thus skimmed bears a lower price than that which is warranted with its cream entire, but there is little perceptible difference. To produce one rupee’s weight of attar, 200,000 roses are required. The price, even on the spot, is extravagant, a rupee’s weight being sold at the English warehouse for 10*l.*! Mr. Melville, who made some for himself one year, said he calculated that the rent of the land, and price of utensils, really cost him at the rate of 5*l.* for the above trifling quantity, without reckoning risk, labour of servants, &c.”—BP. HEBER’S *Journal*.

TARE.

“ A melancholy scene presented itself to us on our arrival at Antioch,—700 men were in the hospitals (dying of some disease which,) if powerful remedies were not early administered, proved fatal in from four to eight or twelve hours. The attention of the medical officers being roused to the true nature of the malady, inquiries were immediately instituted into the food and drink of these poor men; nor was it long before the corn was found to be largely adulterated with the seed of the *Lolium temulentum*, the zizania of the Greeks, well known in the East, and even noticed in Scripture for its very fatal effects.”—AINSWORTH’S *Asia Minor*, &c.

THORNS.—NUBK-TREE.

“The nŭbk, or lotus-tree, the *spina Christi* of Hasselquist, called by the Arabs the *dhom-tree*, has small, dark-green, oval-shaped, ivy-like leaves. Clustering thick and irregularly upon the crooked branches, are sharp thorns, half an inch in length. The smaller branches are very pliant, which, in connexion with the ivy-like appearance of the leaves, sustain the legend that of them was made the mock crown of the Redeemer. Its fruit, as I have before mentioned, is sub-acid, and of a pleasant flavour.”—LYNCH’S *Expedition*.

THORNY HEDGES.

MICAH vii. 4.

“The best of them is a brier : the most upright is sharper than a thorn hedge.”

The cactus forms a very common hedge in Syria and Palestine.

“We were much struck, in our walks, with the cactus, which forms the common hedges here (Beyrout), and grows to an immense size. The stem is often as thick as a man’s body. The leaf is of an oval shape, and studded with thorns. The fruit, which is of the size and shape of a hen’s egg, is very sweet and refreshing.”—*Bible in Palestine*, pp. 31, 32.

“Our course, on departing from Jaffa, lay along a narrow and winding path, through an avenue of prickly pears, forming one of the most secure fences imaginable for the beautiful gardens on either hand. In riding along, what force we saw in the prophet’s declaration, ‘The best of them is a brier : the most upright is sharper than a thorn hedge.’”—*Ibid*.

TREE NEAR HEBRON.

Dr. Keith observes :—" Among many lesser trees in the adjoining plain (Hebron), one called ' Abraham's Oak ' spreads its branches over a space 250 feet in circumference."

VINEYARDS.

" I should have mentioned before the vineyards on this river (the Rhine). Of the beauty of these I had formed an exaggerated idea, and was, therefore, not a little disappointed when I first saw the small, closely-pruned plants on the mountains bordering the stream. An appearance of deep verdure is, I think, the only beauty communicated by the regular array of these short, stunted-looking vines ; but the cultivator will tell you that it is upon this pruning and careful training that the quality of the produce in a great measure depends. When not allowed to climb beyond the height of two or three feet the vine receives the reflected as well as the direct rays of the sun, and the fruit ripens much better. Left to itself, the plant would spread in wild luxuriance and cling to any object that offered a support for its climbing tendrils. Its full and unbroken masses of foliage would obstruct the ripening influences of the sun, and its fruit would be deprived of the degree of heat necessary to bring it to perfection in the climate of Germany. It is said that, if neglected for a single year, or if improperly pruned, the injury sustained by the vineyard is irreparable. I was struck with the analogy to be traced in this, as well as in many other parts of the Kingdom of Nature, with that of Grace. So prone are we to cling to earthly comforts, and to allow them to have the highest place in our affections, that it is not until the pruning hand of the Great Hus-

bandman has been exercised over us that we are enabled to loose our hold of earth and its endearing ties, and are led to place our whole affection upon the Supreme God. Blessed, indeed, is the state of the suffering follower of Christ, when, amidst the afflictive dispensations of Providence, he can recognise with tearful thankfulness the hand of his heavenly Father, and can appropriate the words of our Saviour as applicable to his own particular state : ‘ I am the true vine, and my Father is the husbandman. Every branch in me that beareth not fruit he taketh away : and every branch that beareth fruit, *he purgeth it, that it may bring forth more fruit.*’

“ Celebrated as is the produce of the vineyards on the Rhine, it will not, I think, be uninteresting if I give you the substance of some information we have been able to obtain respecting the growth and culture of the vine. You are perhaps aware that it is in the district extending from Coblentz to Mayence that the largest vineyards are found. The lofty mountains which border the stream at this part of its course offer sites particularly favourable to the growth of this plant. Between Boppart and Bingen, these mountains approach so near to the river that little else can be grown than the vine, and the culture of this is carried on upon terraces, on the sides of the mountains, with a perseverance and industry which are astonishing. In every little crevice and sheltered spot it is planted, and so small is sometimes the quantity of soil on the mountain, that the plant is obliged to be placed in a basket which is inserted in the side of the hill. It almost made us tremble to see the vine-dressers engaged in their apparently hazardous occupation. The mountains in some parts are cultivated to the height of 1,000 feet ; and in one place near Bingen twenty-two terraces may be seen rising one above another. By these are understood every narrow ridge of the mountain which can be rendered profitable. The earth is obliged to be supported

by stone walls, and it is said that many of these terraces are not twice the breadth of the walls that serve as their border. The vine-dressers are generally women, who have not unfrequently some distance to walk from their habitations to the scene of their labours.”—*Letters from the Continent*.

“In the room in which we were entertained, and which was partly open to the sky, a spreading vine trailed along the walls, and formed a lovely shade over our heads, reminding us of the Psalmist’s expression, ‘Thy wife shall be as a fruitful vine by the sides of thine house.’”—*Bible in Palestine*, p. 99.

“We bought a bunch of grapes, of so immense a size, that, though we both tried to carry it home, the weight fatigued us so much we were glad to sit down in the shade of a large tree and lighten our load! The bunch was nearly a yard in length, and certainly from sixteen to eighteen pounds’ weight.”—*Ibid.* p. 496.

“In Syria our yards are open, paved with beautiful white marble, and we plant vines in them to shelter us from the sun in summer. This beautifully illustrates ‘Every one under his vine.’ These vines are supported on large parallel beams of wood, fixed across from the opposite walls.”—*Voice from Lebanon*, p. 6.

ZUKKUM.

“Sherîf brought to me a fruit, or nut, which was described by the land party as growing upon a small thorny tree. The fruit is somewhat like a small date, but of an olive-green colour; the bark of the tree smooth, the leaves thin, long, and oval, and of a brighter green than the bark or fruit. It is bitter and acrid to the taste, and is called by our Arabs the ‘zukkûm,’ which is declared by the Koran to be the food of infidels

in hell. Dr. Robinson, quoting Maundrell and Pococke, describes it as the ‘balsam-tree,’ from the nut of which the oil of Jericho is extracted—called by the pilgrims Zaccheus’ oil, from the belief that the tree which bears it was the one climbed by Zaccheus. Scripture, as Dr. Robinson states, renders it, with more probability, the sycamore, or plane-tree. The ‘zukkûm’ is little more than a shrub in height, and its branches are covered with thorns.

“Zukkûm, or zaccoun, of the Arabs, has various English names, as Jericho plum, Jerusalem willow, oleaster, wild olive, &c. It is the *elægnus angustifolius* of botanists. This tree much resembles the olive, and has been mistaken by many writers for the wild variety of that useful tree. The resemblance is close, not only in the leaves but also in the fruit; the last, however, is larger, and more oblong. The oil extracted from the nut or kernel has been long celebrated in Syria as very efficacious in the treatment of wounds and bruises, and is said to be preferred to the balsam of Mecca for that purpose. It is also supposed by some to be the Myrobalanus of Pliny. . . . Dr. Boyle seems inclined to believe that this oil is the *tzeie* (translated ‘balm’ in our version) mentioned in Genesis, as it is there noticed as a product of Gilead, as the tree producing it is a native of Arabia, or Abyssinia, and not of Palestine; being only cultivated in one or two places in the latter country, and not until a period long after that of Jacob. From this and the evidence afforded in many other parts of the Bible it appears certain that the balsam alluded to was a production of Gilead, and also that it was used as a medicine; and there is a strong probability that it was the oil from the zukkûm. The oil is extracted first by pressing the crushed nuts, and a further portion is obtained by boiling them.”—LYNCH’S *Expedition*.

PART IV.

ILLUSTRATIONS OF ECCLES. iii. 2, AND JER. xxiv. 6.
IRRIGATION.

ILLUSTRATIONS OF ECCLES. iii. 2, AND JER. xxiv. 6.

“ WE reached an Arab village, surrounded by cultivated lands, upon which the labourers were gathering in the spare crops of poor stunted barley. They do not cut the corn with a sickle, or any other instrument, but pluck it up by the roots in handfuls, and bind it, without being made into sheaves, on the backs of camels.”—*FISK’S Pastor’s Memorial.*

IRRIGATION.

“ The draw-wells on the Mahoudieh Canal are different from those of the Nile. They are worked by oxen in the same way, but the wheels are upon a level with the stream ; these are hollow, and, in turning, become filled with water, which they empty as they revolve, by means of a cavity, into a trough that conveys it to the adjacent fields.

“ We remarked another method of irrigating the land. The bank was cut into three steep steps ; on two of these a small pool or cistern was formed, while

the upper one constitutes the end of the irrigating channel. On either side of each step stood a couple of men holding a cord, with a round basket hanging from it. At a signal given, the two men nearest the canal simultaneously swung the cord, which filled the basket with water, while a sudden jerk in the contrary direction emptied it into the cistern. This movement was continued backwards and forwards so quickly that one almost lost sight of the cord and basket. As soon as the first cistern contained sufficient water, the next set of men began to put *their* basket in motion, in order to fill the one above ; and this was afterwards, in its turn, raised by the upper men to supply the irrigating stream. It had altogether a very singular and pretty effect."—*Journey Across the Desert.*

PART V.

THE MIRAGE ("Waters that
fail, or *be not sure*."—Jer.
xv. 18.)

STORMS.

THE SHERKI.

ILLUSTRATION OF DEUT. xxviii.
23.

ILLUSTRATION OF PSALM lxxxiv.
5—7.

THE SHADOW OF THE ROCK.

THE MIRAGE.

JEREMIAH xv. 18.

"A LITTLE before noon, while the sun in his strength was bearing down upon us, we saw in the distance somewhat which had the appearance of a charming lake, with its beautiful blue waters, as if reflecting the deep azure of the sky. It was studded here and there with tufts and clumps of trees, in the midst and on its banks. Sometimes its waters seemed to sparkle in the sun; and, though I knew it to be the *mirage*, and not really water springing up and flowing in the desert, yet it seemed to provoke most keenly the sense of thirst, and almost impelled me to press forward and seek a refreshing draught at its margin. The appearance continued for perhaps half an hour. Our attention was at length diverted by some other object. We looked again, and it was gone; and the far-stretching surface of the sand spoke only of aridity and dearth. I witnessed other instances of mirage. . . . One in particular, which presented the idea of a richly wooded island in the midst

of the lake, and stately buildings on its banks ; and even the waves, as if agitated by a breeze, seemed to be perpetually swelling and flowing, not towards the brink, as with real water, but in the opposite direction.”—FISK’S *Pastor’s Memorial*.

STORMS.

“ Violent storms of wind are frequent during the early part of summer, throughout Mesopotamia, Babylonia, and Susiana. It is difficult to convey any idea of their violence. They appear suddenly and without any previous sign, and seldom last above an hour. It was during one of them that the *Tigris* steamer, under command of Colonel Chesney, was wrecked in the Euphrates ; and so darkened was the atmosphere, that although the vessel was within a short distance of the bank of the river, several persons who were in her are supposed to have lost their lives from not knowing in what direction to swim.”

“ Violent whirlwinds occasionally swept over the face of the country. They could be seen as they advanced from the desert, carrying along with them clouds of sand and dust. Almost utter darkness prevailed during their passage, and nothing could resist their fury. On returning home one afternoon, after a tempest of this kind, I found no traces of my dwellings ; they had been completely carried away. Ponderous wooden frameworks had been borne over the bank, and hurled some hundred yards distant, the tents had disappeared, and my furniture was scattered over the plain.”—LAYARD’S *Nineveh*.

THE SHERKI.

The prophet Jonah suffered grievously from the easterly wind. This is the *sherki*, so much dreaded in

all these countries, which is hot, stormy, and singularly relaxing and dispiriting.

“ Last night, while I was sitting in a large company, the evening having previously been calm and warm, and we were all busily employed in talking, just as the moon rose about ten, an intolerable puff of wind came from the north-east. All were immediately silent, as if they had suddenly felt an earthquake, and then exclaimed, in a dismal tone, ‘ The sherki is come ! ’ As soon as this wind came on, the thermometer rose ten degrees, from 80° to 90°. This was, indeed, the so much dreaded sherki, and it has continued blowing ever since with great violence from the east and north-east. This wind is the terror of these parts, and without it the climate of Sulimania would be very agreeable.”

“ All the people of Sulimania complain of the extraordinary prevalence of the sherki this year, which renders this season intolerably hot and relaxing. They have not had three days together free from this wind since the beginning of the summer. I have several times observed the partial nature of this current of air. It has been blowing in almost a hurricane in a straight current over Sulimania, while a couple of hundred yards off, at our tents, we had only a slight breeze ; nay, I have seen it blowing all round my tent, while the tent itself remained unmoved in a perfect calm.”—RICH’S *Koordistan*.

ILLUSTRATION OF DEUT. xxviii. 23.

“ Throughout nearly the whole of the plain (of Acre), the ground was chapped and cracked to a great depth, and seemed, to the horses’ feet, as hard as iron. And the sun being burning hot, we felt the full force of the declaration, ‘ Thy heaven that is over thy head shall be brass, and the earth that is under thee shall be iron. ’—*Bible in Palestine*.

PSALM lxxxiv. 5—7.

“The water, all derived from recent rains, we found collected in pools among the rocks ; and one of these pools contained a quantity more than sufficient to supply a large body of men and cattle. We replenished our skins with it, as we found it perfectly sweet and pure. Its occurrence suggested to us the rains of heaven, as the possible means by which the Israelites were supplied with the indispensable element in many of their marches through the wilderness.”—*Lands of the Bible*.

THE SHADOW OF THE ROCK.

“I collected around me my friends of the Desert, and we all sat under a mighty rock, whose shade was the greatest luxury. How forcibly does such a situation illustrate the language of Scripture, where the Redeemer is compared to a rock ! It was the only shelter from the excessive heat of the sun, for the tents were like ovens ; and if there had been trees, they would not have afforded us the same comfort. This I pointed out to my hearers, while I declared to them the power and love of the mighty Creator, and the happiness that is the portion of every true believer in Jesus Christ. They listened most attentively, and I left a copy of the Scriptures with the only man who could read. Alas ! I found but one. I was deeply affected with their pressing invitation to remain among them. The Sheikh offered me a tent, ten camels, and the honour of his daughter’s hand.”—*Voice from Lebanon*, p. 162.

PART VI.

ANCIENT MINES. CORAL.

ANCIENT MINES.

WHEN travelling towards Mount Sinai, Dr. Wilson and some of his friends were inspecting through their telescopes a high range of red granite mountains. "We were so much struck with their absolutely naked flanks, and with what appeared to be numerous dark metallic veins, or basaltic dykes, running up their summits like a series of bars or ribs, that we resolved to visit them. On a hill in front of them, which we had to surmount before we could get to their base, we were surprised to see immense quantities of debris and slag, with fragments of stone, mortar, and furnaces, which, we doubted not, had been used in the remotest antiquity for the founding and smelting of ore. When we actually reached the mountains, we found that they had been peeled and excavated to a great extent where the veins and dykes had occurred; and that only their coarser contents had in some places been spared. Numerous grooves and channels seemed to be cut in the extraction of the ore, from the very top to the bottom of the mountains, even where they were most perpendicular; and the mountains are completely spoiled and stripped of their treasures. How they were wrought, it is impossible to say. Great must have been the exposure and the waste of human life in the working of them. . . . They formed to us a most striking illustration of the ancient processes of mining, as referred to in that sublime chapter of Job, the twenty-eighth."—*Lands of the Bible*.

CORAL.

“ The navigation of the Arabian Gulf is so intricate on account of the numerous coral reefs and low rocky islands, that the captain scarcely ventures to take his eyes off the chart. This singular expanse of water should be seen when *calm*, for then the extreme clearness of its bright blue waves cannot fail to excite wonder and admiration ; every pebble may be distinctly seen, though at a depth of thirty fathoms. And what a new world is discovered through this veil of waters ! In one part are forests of pale pink and red coral, spreading forth their luxuriant branches, giving a blush to the element which bathes them ; a few miles further, sprouting from the golden sand, are gardens of every form and growth, in the shape of coralline of the purest white, tipped here and there by the brightest violets ; while on the other side, the eye is relieved from the aspect of the arid rocks of dingy brown, by submarine forests and groves of the brightest green. Shells of the most exquisite form and colour are yielded from this fairy region, and fish of brilliant hues sport amongst its beauties. In many instances the coral reefs rise several feet above the level of the water ; the winding safely through them is painfully interesting.”—See *Journey across the Desert*.

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